

LUIS GABRIEL WALL

- PhD Biochemistry UNLP
- Senior Researcher CONICET.
- Professor Universidad Nacional de Quilmes.
- Head of the Center of Soil Biochemistry and Microbiology
- Soil Biology Lab UNQ.
- 70 papers, 1 book, 9 PhD supervisions
- Soil biochemistry and microbiology.
- Plant microbe interactions.
- Biological Nitrogen Fixation. Symbiosis.



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Academic History: LGW was born in La Plata in 1959. He has a degree in Biochemistry, University of La Plata (UNLP Argentina, 1984), Doctor (PhD) in Biochemical Sciences from the University of La Plata (UNLP Argentina, 1990), postdoctoral degree in Plant Physiology in Umeå, Sweden (1994 - 1995). At present he is Senior Researcher of CONICET (since 1996 and promoted to highest category 2024) and Full Professor at the University of Quilmes (UNQ) (since 1993), reaching category I in the Research Incentives Program of Argentina (2005 and confirmed 2016). LGW is founder of the LBMIBS (Laboratory of Biochemistry, Microbiology and Biological Interactions in the Soil) and director of the LBS (Laboratory of Soil Biology) of the Biotechnological Services Platform of the UNQ. He has published 69 articles in international journals, 8 book chapters, has lectured and presented more than 100 papers at scientific conferences, both nationally and internationally, and has written a scientific popularization book "Plants, Bacteria, Fungi, my Wife, the Cook and the Lover" published by Siglo XXI Editores (in Spanish), about interactions between plants and microorganisms, one of his research topics. He has supervised 9 PhD theses (2000, 2005, 2005, 2007, 2008, 2009, 2015, 2015, 2017), co-supervised one (2014) and supervised a bachelor thesis (2001). Currently, he is supervising 2 students of doctoral theses at the UNQ. LGW has taught Biological Chemistry and Biochemistry since 1984, beginning his teaching career in the Faculty of Exact Sciences, National University of La Plata (UNLP Argentina). Since 1993 he moved to the UNQ, where he is now full professor in the Biochemistry Area. In the UNQ he became involved in educational management as Director of the Diploma in Science and Technology (1998-2000), Director of the Department of Science and Technology (2001) and Vice-Rector for Academic Affairs of the National University of Quilmes (2002). Since the year 2002 LGW is dedicated only to science and education. In 2008 he organized the XV International Meeting on *Frankia* and actinorhizal plants held in Bariloche, Argentina. LGW coordinated a big consortium with a Strategic Area Project of the Ministry of Science, Technology and Productive Innovation (MINCyT, Argentina), called BIOSPAS (Soil Biology and Sustainable Agricultural Production) with the participation of 12 research groups from different National Universities and Argentinean Research Institutes, the NGO AAPRESID and two companies, Rizobacter Argentina SA and La Lucía SA of the Romagnoli Group. Since the project BIOSPAS, LGW has continued working with Farmers of belonging to AAPRESID organization (www.aapresid.org.ar) investigating the effects of different soil management on the quality and health of agricultural soils and their biological and biochemical diversity. LGW has worked in collaboration with other laboratories in Argentina, France, Germany and the United States. Research Lines: Soil Microbiology. Microbial ecology Microbial diversity and soil biochemistry. Agricultural soils Plant-microorganism and microbe-microbe interactions. Biological Fixation of Nitrogen. Symbiosis of radicular nodules: legumes-rhizobia and actinorhizal plants-Frankia. Biofertilizers Rhizospheric actinomycetes. Pseudomonas group, diversity, antagonism and biological control. Phosphorus solubilizing bacteria. Endophytic bacteria Lipids of the soil. The enzymes of the soil. Soil respiration. Analysis of protein fractions related to glomalin in soils.

Google scholar: citaciones totales 4930; h-index 36; i10-index 73.

https://scholar.google.com/citations?hl=en&user=m_T3LEsAAAAJ

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PUBLICATIONS

BOOKS

"Historias del inframundo biológico". Luis G. Wall. 2020. Siglo XXI Editores, Buenos Aires, Argentina. ISBN 978-987-629-994-7

"Plantas, bacterias, hongos, mi mujer, el cocinero y su amante". 2da Edición corregida y ampliada. Luis G. Wall. Siglo XXI. 2005. ISBN987-1220-25-1 (*). 2^{da} reimpresión 2008. /

RESEARCH ARTICLES (90 papers, shown last 5 years)

- 90- Ferrari A; Covelli J; Wall LG. Whole soil fatty acid lipidic signature discriminates agriculture intensification in no-till systems. *APPLIED SOIL ECOLOGY*. 2024 vol.198, 0929-1393.
- 89- Jurburg S.D.;(...) Wall L.G., & The Datathon Consortium. Datathons: fostering equitability in data reuse in ecology. *TRENDS IN MICROBIOLOGY*. Londres: ELSEVIER SCIENCE LONDON. 2024 vol.32 n°5. p415 - 418. issn 0966-842X.
- 88- Berckx F; Wibber D; Brachmann A; Morrison C; Obaid N; Blom J; Kalinowski J; Wall Lg; Pawlowski K. Genome analysis and biogeographic distribution of the earliest divergent Frankia clade in the southern hemisphere. *FEMS Microbiology Ecology*. London: Oxford University Press. 2024 vol.100 n°5, 1574-6941
- 87- Wall LG. La salud del suelo y las personas. *Nuestro Suelo*. Buenos Aires: Asociación Argentina de Ciencia del Suelo. 2023 vol.10 n°. p12 - 12. issn 2618-5571.
- 86- Shifeng Cheng; Yu Zhang; Yuan Fu; Wenfei Xian; Xiuli Li; Fengjiao Bu; Yong Feng; Yan Shi; Shiyu Chen; Robin van Velzen; Alison Berry; Marco Salgado; Hui Liu; Tingshuang Yi; Pascale Fournier; Nicole Alloisio; Petar Pujic; Hasna Boubakri; Eric Schranz; Pierre-marc Delaux; Gane Ka-shu Wong; Valerie Hocher; Sergio Svistoonoff; Hassen Gherbi; Ertao Wang; Wouter Kohlen; Luis Wall; Martin Parniske; Katharina Pawlowski; Normand Philippe; Jeffrey Doyle. 2023. Comparative Phylogenomics and Phylotranscriptomics Provide Insights into the Genetic Complexity of Nitrogen Fixing Root Nodule Symbiosis. *Plant Communications*, 5, 100671
- 85- Frene JP; Figuerola E; Erijman L; Gabbarini L; Wall LG. 2022. Impact of diversification and intensification of crop rotation (DICR) in soil bacterial microbiota in on-farm study after four and seven years. 2022. *Applied Soil Ecology*. Amsterdam: Elsevier Science BV. issn 0929-1393, 104592 84- El Mujtar, Verónica A.; Chirido, Fernando; Lagares, Antonio; Wall, Luis ; Tittonell, Pablo. Soil bacterial biodiversity characterization by flow cytometry: The bottleneck of cell extraction from soil. 2022. *Methods in Ecology and Evolution*. Londres: Wiley. eissn 2041-210X. DOI: 10.1111/2041-210X.13876
- 83- Frene JP, Faggioli V, Covelli J, Reyna D, Gabbarini LA, Sobrero P, Ferrari A, Gutierrez M and Wall LG (2022) Agriculture by irrigation modifies microbial communities and soil functions associated with enhancing C uptake of a steppe semi-arid soil in northern Patagonia. *Front. Soil Sci.* 2:835849. doi: 10.3389/fsoil.2022.835849
- 82- Gabbarini, L A; Figuerola, E; Frene, J P; Robledo, N B; Ibarbalz, F M; Babin, D; Smalla, K; Erijman, L; Wall, L G. (2021) "Impacts of switching tillage to no-tillage and vice versa on soil structure, enzyme activities, and prokaryotic community profiles in Argentinean semi-arid soils". *FEMS MICROBIOLOGY ECOLOGY*, 97 (2021) fiab025.
- 81- Draghi, Walter Omar; Alvarez, Florencia; Russo, Daniela Marta; Lagares, Antonio; Wall, Luis Gabriel; Zorreguieta, Angeles. (2021) "Root-associated Burkholderia spp. on the hairy vetch (*Vicia villosa* Roth.) cover crop vary depending on soil history of use". *Rhizosphere*, 17 (2021) 100297
- 80- Dominguez A; Gabbarini L; Rodriguez P; Escudero J; Wall LG; Bedano JC. (2021) "Diversification of crop residues enhances enzymatic activities in casts of the earthworm *Aporrectodea caliginosa* (Savigny, 1826)". *APPLIED SOIL ECOLOGY*, 166 (2021) 104000
- 79- Agaras, Betina Cecilia; Noguera, Fabián; González Anta, Gustavo; Wall, Luis; Valverde, Claudio. (2020) "Biocontrol potential index of pseudomonads, instead of their direct-growth promotion traits, is a predictor of seed inoculation effect on crop productivity under field conditions". *BIOLOGICAL CONTROL*, 143 (2020) 104209
- 78- Rodriguez P; Dominguez A; Moreira Ferroni M; Wall LG; Bedano JC. (2020) "The Diversification and Intensification of Crop Rotations under No-Till Promote Earthworm Abundance and Biomass". *Agronomy* 2020, 10, 919.
- 77- Frene JP, Gabbarini LA, Wall LG. (2019). Soil physiology discriminates between no-till agricultural soils with different crop systems on winter season. *Soil Use and Management*, doi.org/10.1111/sum.12568
- 76- Bedano JC, Vaquero F, Domínguez A, Rodríguez MP, Wall LG, Lavelled P. (2019) Earthworms contribute to ecosystem process in no-till systems with high bcrop rotation intensity in Argentina. *Acta Oecologica* 98 (2019) 14–24
- 75- Chabaud M, Fournier J, Brichet L, Abdou-Pavy I, Imanishi L, Brottier L, Piroilles E, Hocher BV, Franche C, Bogusz D, Wall LG, Svistoonoff S, Gherbi H, Barker DG (2019) Chitotetraose activates the fungal-dependent endosymbiotic signaling pathway in actinorhizal plant species. *PLoS ONE* 14(10): e0223149.
- 75- Wall LG, Gabbarini LA, Ferrari AE, Frene JP, Covelli J, Reyna D, Robledo NB. (2019). Changes of paradigms in agriculture soil microbiology and new challenges in microbial ecology. *Acta Oecologica* 95 (2019) 68–73
- 74- Chaia E.E., Huss-Danell K., Wall L.G., Myrold D.D. (2019) N₂ fixation by riparian plants belonging to Coriariaceae, Rhamnaceae, and Gunneraceae in Northwest Patagonia. *Symbiosis* (Springer) 77, 237–247