

Aakriti Darnal

Email: aakriti.darnal@laimburg.it

Main Research Activities:

- Exploring grape pomace as a rich source of polyphenols with significant health and economic benefits, focusing on their bioactive properties—especially in preventing amyloid-related disorders like Huntington's—and advocates for collaboration between researchers and local industries – SUSTAIN Project
- Sensory and chemical analyses of international single-variety wines and construction of statistical correlation models – FruitService Project
- Study of the effect of variables such as *terroir* and winery operations on the quality of Pinot Blanc wines from south Tyrol – Wine ID Project
- Study of the effect of hydroxytyrosol (a natural polyphenol in wine) on the chemical and sensory attributes of an organic red Tuscan wine – VINOX Project
- Study on the evolution of condensed tannins during vinification and storage of Schiava wines, study of pigment evolution during Schiava winemaking, in relation to winemaking methods and aging, and study the effect of winemaking variables on other chemical components of Schiava wines – VARIETAN Project

Academic Training

- **2025 – Ongoing:** Scientific collaborator, Laimburg 6, I-39040 Ora (BZ), Italia
- **2021- 2025:** PhD in Food Engineering and Biotechnology- Free University of Bozen-Bolzano, Piazza Università, 1, 39100, Bolzano, BZ
- **2024:** Period Abroad University of Bordeaux- Institute of Vineyard and Wine Science (ISVV)
- **2018-2021:** Master of Science – Assumption University (ABAC), 592 3 Soi Ramkhamhaeng, 24, Hua Mak, Bang Kapi District, Bangkok, Thailand
- **2011-2016:** Bachelor of Science – SANN International College, Chabahil, 5582, Kathmandu, Nepal

Academic Engagements

Teaching Assistant

- Food Analysis Laboratory – Agricultural Industries Course (Bachelor of Science in Agricultural, Food, and Mountain Environmental Sciences)
- Wine Analysis Laboratory – Wine Product Innovation and Authenticity Course (Master of Science in Food Science for Innovation and Authenticity)

Other activities (Series of Lectures)

- Production of Carbonated Roselle Juice and Roselle Wine Cooler (Bachelor of Science in Agricultural, Food, and Mountain Environmental Sciences)
- Production of Carbonated Roselle Juice and Roselle Wine Cooler (Master of Science in Food Science for Innovation and Authenticity, Master of Science in Viticulture, Enology, and Wine Marketing)
- Correspondence Analysis- Chemometric approaches to study the chemical and sensory markers of food processing (PhD School of Food Engineering and Biotechnology)

Language Skills

Mother Tongue : Nepali

Other Languages: Hindi, Italian (A2 Level), Japanese (Basic Spoken)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

Conferences

International

- In Vino Analytica Scientia (IVAS), 3rd-7th July 2022, Neustadt, Germany - “ Effect of terroir and winemaking protocol on the chemical and sensory profiles of Pinot Blanc wine”, Aakriti Darnal, Simone Poggesi, Vakarė Merkyte, Edoardo Longo, Marco Montali, Emanuele Boselli. ivas2022.com (Poster)
- 10th European Conference on Sensory and Consumer Research (EuroSense), 13th -16th September 2022, Turku, Finland- “Matrix fingerprint analysis of international Sauvignon Blanc and Chardonnay wines using chemometric methods with sensory and analytical profiles in data fusion approach” Aakriti Darnal, Simone Poggesi, Adriana Teresa Ceci, Edoardo Longo, Leonardo Vanzo, Emanuele Boselli. [Home: 10th European Conference on Sensory and Consumer Research, Turku, Finland \(elsevier.com\)](https://www.elsevier.com/locate/foodchem) (Poster)
- 3rd Science & Wine World Congress, 14-16 June, 2023, Porto, Portugal - “ Effect of the grape cultivar on the condensed tannins in seeds powder, a renewable resource for protein haze prevention in wine”, Aakriti Darnal, Edoardo Longo, Milena Lambri, Vakare Merkytė, Elia Romanini & Emanuele Boselli. [3rd World Science & Wine Congress – Science & Wine \(ciencia-e-vinho.com\)](https://www.ciencia-e-vinho.com) (Oral)
- Oeno Macrowine, 10-13 July, 2023- Bordeaux, France- “Influence of winemaking variables and vineyard locations on chemical and sensory profiles of South Tyrolean Pinot Blanc”, Aakriti Darnal, Edoardo Longo, Simone Poggesi, Vakarė Merkyte, Marco Montali, Emanuele Boselli. [Oeno-Macrowine 2023 - Home \(isvv-events.com\)](https://www.isvv-events.com) (Poster)

National

- 28th Workshop on the Developments in the Italian PhD Research on Food Science, Technology and Biotechnology, 18/09/2024 – 20/09/2024 Catania, Italy– “Chemical markers in single-variety wines in relation to geographical origin and winemaking factors”, Aakriti Darnal, Edoardo Longo, Emanuele Boselli. <https://www.phdfood.it/> (Oral)
- 27th Workshop on the Developments in the Italian PhD Research on Food Science, Technology and Biotechnology, 13-15 September, 2023, Portici, Naples (Italy) – “Combining chemical and sensory data to elucidate the acceptability of single-varietal wines (Pinot Gris and Pinot Noir) from different geographical origins”, Aakriti Darnal, Edoardo Longo, Emanuele Boselli. <https://www.phdfood.it/> (Poster)

Workshop

- "6th International Mass Spectrometry School (IMSS)" (September, 17-22), Cagliari, Sardinia, (Italy), [6th IMSS 2023 \(spettrometriadiamassa.it\)](https://www.spettrometriadiamassa.it)
- Understanding Consumers 2024- preferences, expectations, contexts, individual differences, emotions, and implicit methods [UNDERSTANDING CONSUMERS 2024 - SISS \(sciencesensoriali.it\)](https://www.sciencesensoriali.it)

Publications

Authors	Title	Year	Source Title	Volume	Issue	DOI
Zuccon, G., Darnal, A., Longo, E., D'Aronco, S., Boselli, E., Orlando, P., & Ceccon, A	Molecular mechanisms of amyloid inhibition: an NMR-driven framework with polyphenols as a case study	2025	Frontiers in Molecular Biosciences	12		https://doi.org/10.3389/fmolb.2025.1676927
Duley, G., Ceci, A. T., Longo, E., Darnal, A., Martín-García, B., & Boselli, E.	Chemical and sensory properties of South Tyrol red wines from disease-resistant and Vitis vinifera cultivars	2025	npj science of food	9	1	https://doi.org/10.1038/s41538-025-00412-z
Darnal A, Ceccon A, Magni M, Robatscher P, Poggesi S, Boselli E and Longo E	Enantioselective-GCxGC determination of α -terpinyl ethyl ether in wine: quantitative analysis and identification of main terpene precursors	2024	Applied Food Research	4	2	https://www.sciencedirect.com/science/article/pii/S2772502224001483
Ceci, A.T., Darnal, A., Poggesi, S., Betnga, P.F.T., Longo, E., and Boselli E.	Enhancing the stability of a Red Organic Wine through Hydroxytyrosol Supplementation at Bottling: A Time-Dependent Analysis	2024	Applied Food Research	4	2	https://www.sciencedirect.com/science/article/pii/S2772502224001239
Darnal, A., Poggesi, S., Merkytė, V., Longo, E. and	South-Tyrolean pinot blanc identity: Exploration of chemical and sensory	2024	Food Chemistry: X	24		https://www.sciencedirect.com/science/article/pii/S2590157524007120

Boselli, E.	profile changes ascribed to vineyard locations and winemaking variables					
Tchouakeu Betnga, P. F., Poggesi, S., Darnal, A., Longo, E., Rudari, E., & Boselli, E.	Terroir Dynamics: Impact of Vineyard and Canopy Treatment with Chitosan on Anthocyanins, Phenolics, and Volatile and Sensory Profiles of Pinot Noir Wines from South Tyrol.	2024	Molecules	29	9	10.3390/molecules29091916
Darnal A., Poggesi S., Longo E*, Arbore A., & Boselli E.	Decoding the Identity of Pinot Gris and Pinot Noir Wines: A Comprehensive Chemometric Fusion of Sensory (from Dual Panel) and Chemical Analysis	2024	Foods	13	1	10.3390/foods13010018
Darnal A., Poggesi S., Ceci A.T*, Mimmo T., Boselli E., & Longo E.	Interactive effect of pre- fermentative grape freezing and malolactic fermentation on the anthocyanins profile in red wines prone to colour instability	2023	European Food Research and Technology	249	8	10.1007/s00217-023-04270-5

Darnal A., Poggesi S., Ceci A.T*, Mimmo T., Boselli E., & Longo E.	Effects of pre-and post-fermentative practices on oligomeric cyclic and non-cyclic condensed tannins in wine from Schiava grapes	2023	Current Research in Food Science	6		10.1016/j.crfs.2023.100513
Poggesi S., Darnal A., Ceci A.T., Longo E.*, Vanzo L., Mimmo T., & Boselli E.	Fusion of 2DGC-MS, HPLC-MS and Sensory Data to Assist Decision-Making in the Marketing of International Monovarietal Chardonnay and Sauvignon Blanc Wines	2022	Foods	11	21	10.3390/foods11213458