CURRICULUM VITAE ET STUDORIUM

Andrea Natolino

Personal Information

Date of birth	05.08.1986
Nationality	Italian

Education

Bachelor Degree	in Food Science and Technology - University of Udine (2009)
Master Degree	in Food Science and Technology (curricula: Food Quality Management and Control) – University of Udine (2011)
PhD	in Food Science - University of Udine (2016) Title: "Application of Supercritical Fluids Technology on winery by-products"

Post-doctoral activities

2023- ongoing	Research Fellow [Researcher T.D.(A)], Enology and Viticulture research group, Department of Agricultural, Food, Environmental and Animal Sciences, University of Udine, Italy
2022	National Scientific Habilitation as Associate Professor in Food Science and Technology (AGR-/15; 07/F1)
2016-2022	Postdoctoral Fellow, Enology and Viticulture research group, Department of Agricultural, Food, Environmental and Animal Sciences, University of Udine, Italy

International research experience

2014-2015 (6 month)	Research period at the Department of Chemical engineering and environmental technology of the University of Valladolid (Spain)

Scientific activities

Research topics:

- Supercritical and subcritical fluid extraction of bioactive compounds with high-added value from natural matrices;
- Extraction and hydrolysis process with subcritical water;
- Mathematical modelling of extraction processes, scale-up and economic evaluations;
- Application of innovative and emerging technologies as pre-treatments for the extraction of bioactive compounds with high-added value from natural matrices;
- Application of innovative and emerging technologies on winemaking process.

Research projects

Project
2008-2011 FVG region project (L.R.26/2005art.17) – Improving of production and transformation process of hemp (Cannabis sativa) and rice (Oryza sativa L.) to obtain high-added value compounds and environmental protection.

2011-2015 Enology AGER project - Valorisation of winemaking by-products and waste by application of innovative technologies for extraction of natural products of high added value.
2017. PRID project – Modulation of microbiome-gut-brain axis with nutraceuticals in dog.
2018. BIOraffinery project: added-value of winey by-products. BIOVALE
2023. iNEST project - Interconnected Nord-Est Innovation Ecosystem – Spoke 7 Smart Agri-Food

Teaching activities

A.A.	Teaching
2017-2018	Instrumental and practical activities for ENOLOGY II - bachelor and master degree in Viticulture and Enology – University of Udine
2019-2020	Instrumental and practical activities for ENOLOGY II - bachelor and master degree in Viticulture and Enology – University of Udine
2021-2022	Instrumental and practical activities for ENOLOGY II - bachelor and master degree in Viticulture and Enology – University of Udine
2021-2022 - ongoing	Teachning of the course "DERIVATIVES TECHNOLOGY OF VINE AND WINE at the bachelor course in Viticulture and Enology – University of Udine

Supervisor or Co-supervisor of 25 bachelor and master thesis in Viticulture and Enology, Food Science and Technology, and Agricultural Science and Technology.

Grants and awards

2016: SIVE PhD award "R. Ferrarini" for the best national PhD dissertation on enology field

2021: SIMEI-UIV award for the best research on winemaking technology presented at the ENOFORUM WEB CONFERENCE (23-25 February 2021).

Scientific pubblications

Number	Year	Pubblication
1	2010	Da Porto C., Natolino A., Decorti D. Batch distillation of grappa: effect of the recycling operation. International Journal of Food Science and technology. 45 (2), 271-277, 2010.
2	2012	Da Porto C., Decorti D., Natolino A., Invernizzi S. Application of supercritical carbon dioxide for hemp (Cannabis sativa L.) seed oil extraction. Industrie Alimentari, 51 (526), 5-10, 2012.
3	2012	Da Porto C., Voinovich D., Decorti D., Natolino A. Response surface optimization of hemp seed (Cannabis sativa L.) oil yield and oxidation stability by supercritical carbon dioxide extraction. The journal of supercritical fluids, 68, 45-51.
4	2013	Da Porto C., Decorti D., Natolino A. Effect of enzymatic preparation with pectolytic activities on conventional extraction and ultrasound-assisted extraction of oil from grape seed (Vitis vinifera L.). International Journal of Food Science and technology, 48 (10), 2127-2132, 2013.

5	2014	Da Porto C., Decorti D., Natolino A. Separation of aroma compounds from industrial hemp inflorescences (Cannabis sativa L.) by supercritical CO2 extraction and on-line fractionation. Industrial Crops and Products, 58, 99-103, 2014.
6	2014	Da Porto C., Decorti D., Natolino A. Ultrasound assisted extraction of volatile compounds from industrial Cannabis sativa L. inflorescences. International Journal of Applied Research in Natural Products, 7 (1), 8-14, 2014
7	2014	Da Porto C., Decorti D., Natolino A. Water and ethanol as co-solvent in supercritical fluid extraction of proanthocyanidins from grape marc: a comparison and a proposal. The Journal of Supercritical Fluids, 87, 1-8, 2014.
8	2014	Da Porto C., Natolino A., Decorti D. Extraction of proanthocyanidins from grape marc by supercritical fluid extraction using CO2 as solvent and ethanol-water misture as co-solvent. The Journal of Supercritical Fluids, 87, 59-64, 2014.
9	2015	Da Porto C., Natolino A., Decorti D. The combined extraction of polyphenols from grape marc: Ultrasound assisted extraction followed by supercritical CO2 extraction of ultrasound – raffinate. LWT – Food Science and technology, 61 5(1), 98-104.
10	2015	Da Porto C., Decorti D., Natolino A. Potential Oil Yield, Fatty Acid Composition, and Oxidation Stability of the Hempseed Oil from Four Cannabis sativa L. Cultivars. Journal of Dietary Supplements, 12 (1), 1-10, 2015.
11	2015	Da Porto C., Natolino A., Decorti D. Effect of ultrasound pre-treatment of hemp (Cannabis sativa L.) seed on supercritical CO2 extraction of oil. Journal of Food Science and Technology, 52 (3), 1748-1753, 2015
12	2015	Da Porto C., Decorti D., Natolino A. Application of Supercritical CO2 extraction procedure to recover volatile compounds and polyphenols from Rosa Damascena. Separation Science and Technology, 50 (8), 1175-1180, 2015.
13	2016	Martinez G.A., Rebecchi S., Decorti D., Domingos J.M.B., Natolino A., Del Rio D., Bertin L., Da Porto C., Fava F. Towards multi-purpose biorefinery platforms for the valorisation of red grape pomace: Production of polyphenols, volatile fatty acids, polyhydroxyalkanoates and biogas. Green Chemistry, 18 (1), 261-270, 2016.
14	2016	Da Porto C., Decorti D., Natolino A. Microwave pretreatment of Moringa Oleifera seed: effect on oil obtained by pilot-scale supercritical carbon dioxide extraction and Soxhlet aparatus. The Journal of Supercritical Fluids, 107, 38-43, 2016.
15	2016	Natolino A., Da Porto C., Rodriguez-Rojo S., Moreno T., Cocero M.J. Supercritical antisolvent precipitation of polyphenols from grape marc extract. The Journal of Supercritical Fluids, 118, 54-63, 2016.
16	2017	Da Porto C., Natolino A. Supercritical fluid extraction of polyphenols from grape seed (Vitis vinifera): study on process variables and kinetics. The Journal of Supercritical Fluids, 130, 239-245, 2017.
17	2018	Da Porto C., Natolino A. Optimization of the extraction of phenolic compounds from red grape marc (Vitis vinifera L.) using response surface methodology. Journal of Wine Research, 1-11.

18	2018	Da Porto C., Natolino A. Extraction kinetic modelling of total polyphenols and total anthocyanins from saffron floral bio-residues: Comparison of extraction methods. Food Chemistry, 258, 137-143.
19	2018	Ultrasound-assisted extraction of proanthocyanidins from vine shoots of Vitis vinifera. Journal of Wine Research, 29(4), 290-301.
20	2019	Natolino A., Da Porto C. Supercritical carbon dioxide extraction of pomegranate (Punica granatum L.) seed oil: Kinetic modelling and solubility evaluation. Journal of Supercritical Fluids, 151, 30-39.
21	2020	Natolino A., Da Porto C. Kinetic models for conventional and ultrasound assistant extraction of polyphenols from defatted fresh and distilled grape marc and its main components skins and seeds. Chemical Engineering Research and Design, 156, 1-12
22	2020	Celotti E., Stante S., Ferrarretto P., Roman T., Nicolini G., Natolino A. High power ultrasound treatments of red young wines: Effect on anthocyanins and phenolic stability indices. Foods, 9 (10), 1344.
23	2021	Celotti E., Osorio Barahona M.S., Bellantuono E., Cardona J., Roman T., Nicolini G., Natolino A. High-power ultrasound on the protein stability of white wines: preliminary study of ampliktude and sonication time. LWT - Food Science and technology, 147, 111602
24	2022	Natolino A, Celotti E. Ultrasound treatment of red wine: effect on polyphenols, mathematical modeling, and scale-up considerations. LWT – Food Science and technology, 154, 112843
25	2022	Celotti E., Lazaridis G., Figelj J., Scutaru Y., Natolino A. Comparison of a rapid light-induced and forced test to study the oxidative stability of white wines. Molecules, 27 (1), 326.
26	2022	Natolino A., Da Porto C., Scalet M. Broken and intact cell model for supercritical carbon dioxide extraction of tea Camellia sinensis (L) seed oil. Journal of supercritical fluids, 180, 105422
27	2022	Comuzzo P., Natolino A., Celotti E. Sustainable approach to quality control of grape and wine. Improving Sustainable Viticulture and Winemaking Practices, pp327-349.
28	2022	Da Porto C., Natolino A., Scalet M. Improved sustainability in wine industry by-products: a scale-up and economical feasibility study for high-value compounds extraction using modified SC-CO2. ACS Omega, 7 (38), 33845-33857.
29	2023	Buiatti S., Tat L., Natolino A., Passaghe P. Biotransformation performed by yeasts and aromatic compounds provided by hop – a review. Fermentation, 9(4), 327.
30	2023	Natolino A., Tat L., Gallo A., Roman T., Celotti E. Use of potassium polyaspartate on white wines: interaction with proteins and aroma compounds. Food Research International, 168, 112768.

International and national conferences

Number	Year	Pubblication
1	2013	Natolino A. "Applications of Supercritical Fluids Technology on winery by-products" – XVIII Workshop on the developments in the Italian PhD Research on Food Science technology and Biotechnology, 25-27 Settembre 2013, Conegliano

2	2013	Da Porto C., Decorti D., Natolino A. "Supercritical fluid extraction as green technology to apply in wine waste integrated bio-refinery" - 2013 Effost Annual Meeting: Bio-based Technologies in the Context of European Food Innovation Systems, Novembre 2013, Bologna, Italia
3	2014	Martinez G., Domingos J., Rebecchi S., Bertin L., Fava F., Da Porto C., Natolino A., Decorti D., "An agro- industrial waste valorization: biopolymer production from dephenolized and fermented grape pomace" – Ecomondo 2014, 5-8 Novembre 2014, Rimini, Italia
4	2015	Da Porto C., Decorti D., Natolino A., "Wine waste integrated biorefinery: application of supercritical CO_2 extraction" – CEI-IRC European Workshop on Advanced Biofuels, Biorefinery and Bioeconomy, 25-27 Marzo 2015, Bratislava, Slovacchia
5	2015	Da Porto C., Decorti D., Natolino A. "Supercritical carbon dioxide extraction of proanthocyanidins from wine-waste" – 9th Malta World Congress on Polyphenols Applications, 3-5 giugno 2015, St.Julian's, Malta, Malta
6	2015	Natolino A. "Applications of Supercritical Fluids Technology on winery by-products" – XX Workshop on the developments in the Italian PhD Research on Food Science Technology and Biotechnology, 23-25 Settembre 2015, Perugia, Italia
7	2016	Da Porto C., Natolino A., Decorti D. "The combined extraction of polyphenols from grape marc: ultrasound assisted extraction followed by supercritical CO_2 extraction of ultrasound-raffinate" – 2nd International conference on ultrasonic-based applications: from analysis to synthesis, 6-8 Giugno 2016, Caparica, Lisbona, Portogallo
8	2017	Natolino A. "Application of Supercritical Fluids technology on winery by-products" ENOFORUM 2017, 16-18 Maggio 2017, Vicenza, Italia.
9	2018	Da Porto C., Natolino A., Scalet M. "Valorisation of vine-shoots: ultrasound-assisted extraction of proanthocynidins" 3rd international Caparica conference on Ultrasonic-based applications: from analysis to synthesis, 11-14 Giugno 2018, Caparica, Lisbona, Portogallo
10	2021	Natolino A., Roman T., Nicolini, G., Celotti, E. "Innovations on red winemaking process by ultrasound technology", ENOFORUM WEB CONFERENCE, 23-25 Febbraio 2021.
11	2021	Natolino, A., Roman T., Nicolini G., Celotti E. "ultrasound technology: a new tool for low-input red winemaking", ENOFORUM USA, 4-5 Maggio 2021.
12	2021	Natolino A., Roman T., Nicolini G., Celotti E. "Ultrasuoni: tecnologia emergente e a basso impatto per la vinificazione delle uve rosse", ENOFORUM ITALIA, 18-20 Maggio 2021.
13	2022	Celotti E., Roman T., Gallo A., Natolino A. High power ultrasound tretament of crusched grape grapes: beyond the extraction phenomena. 43° WORLD CONGRESS OF VINE AND WINE, 31 Ottobre- 4 Novembre 2022, Ensenada, Messico.
14	2022	Gallo A., Paolini M., Tonidandel L., Leonardelli A., Barbero-Fondazione A., Celotti E., Natolino A., Schneider R., Larcher R., Roman T. Influence of protein stabilization with aspergillopepsin I on wine aroma composition. IVAS 2022, 3-7 Giugno 2022 Neustadt, Germania
15	2023	Natolino A., Roman T., Gallo A., Celotti E. Yeast protein extracts: sustainable strategy for wine protein stabilization. ENOFORUM WEB SCIENTISTS, 13 Marzo 2023.

16	2023	Natolino A. Estratti proteici di lievito: strategia sostenibile per la stabilizzazione proteica dei vini bianchi. ENOFORUM ITALIA 2023, 16-18 Maggio 2023, Vicenza, Italia.
17	2023	Natolino A., Gallo A., Celotti E., Roman T. Preliminary studies of the combined effect of ultrasound and Aspergillopepsins I on the protein instability indices of Gewürztraminer wine. 44° WORLD CONGRESS OF VINE AND WINE, 5-9 Giugno 2023, Jerez de la Frontera, Cadice, Spagna.

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