

University Academic Curriculum Vitae - Andrea Polo

Personal information

Name: **Andrea Polo**
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Education since leaving school

- 2004. BSc. at the University of Padova, Faculty of Natural Science, 110/110 *cum laude*.
- 2006. MSc. at the University of Padova, Science, Engineering and Liberal Arts interfaculty, 110/110 *cum laude*.
- 2010. PhD school in Molecular Sciences and Plant, Food and Environmental Biotechnologies, PhD course in Chemistry, Biochemistry and Ecology of Pesticides. University of Milan – Agricultural Faculty, Department of Food Science, Technology and Microbiology (DiSTAM). PhD thesis: “The control of deleterious biofilm on abiotic surfaces: from a more sustainable use of biocides to a new environmentally-friendly approach”.

Last appointment

- Title of appointment: “Study and characterization of microbial biofilms in the gastrointestinal environment and fermented foods”.
- Start of appointment: 01/10/2021
- Level of appointment: RTD-A at Free University of Bozen, Faculty of Agricultural, Environmental and Food Sciences.
- Brief description of responsibilities: Study of microbial ecosystems in gastrointestinal environments and in fermented food matrices; development of new functional foods/beverages; study of the effects of novel functional foods on human colonic microbiota using in vitro models; investigation of diet impacts on structure and functionality of human intestinal microbiota.

Professional experience

Chronological list of all previous employments

<i>From / to</i>	<i>Job title</i>	<i>Name of academic Institution / employer</i>	<i>Role</i>	<i>Main responsibilities/activities</i>
October 2018 – September 2021	Study of microbial ecosystem in fermented beverages and food: from the analysis of ecosystem to starter development	Free University of Bozen	Researcher with fixed-term contract (RTD-A)	Study of microbial communities in fermented foods and in gut ecosystems through validated in vitro models (i.e. SHIME); selection of tailored starters to develop new functional foods/beverages.
March 2016 – July 2018	Development of the transdisciplinary research network on environment and health in South Tyrol (TER)	Free University of Bozen	Postdoctoral fellow (AR)	Establishment and maintenance of relationships with partners, institutions and stakeholders; search for new grant opportunities; support in projects preparation;

				fundraising activity for inter- and transdisciplinary projects; organisation of international and interdisciplinary events; support in ongoing research activities.
March 2015 – March 2016	S.I.P.O.F.A in Sierra Leone: participate entrepreneurial development for optimisation of cashew production chain in Sierra Leone (Food security programme for vulnerable communities funded by CARIPLO Foundation)	COOPI – International Cooperation, Milan, Italy	Project Manager	To ensure the acquisition of the results foreseen by the project in technical as well as economic/financial terms. In particular: 1) coordination and monitoring of activities foreseen by the project; 2) relations with institutional and operative interlocutors; 3) supervision and monitoring of tasks and activities carried out by local staffs involved in the project; 4) preparation of documents and reports concerning the awareness of project; 5) management and supervision of the project budget
January 2015	Assessing the microbiological risk to manuscripts stored in the degree thesis archive of University of Milan	University of Milan, Department of Food, Environmental and Nutritional Sciences (DeFENS), Milan, Italy	Postdoc researcher (independent contractor agreement)	Study of microbial communities on manuscript surfaces and in the repository air, and of microclimatic conditions
November 2014	Teaching	Istituto Comprensivo Statale “Don Paolo Galliero”, Tribano (PD), Italy	Teacher	Teaching
October 2014	Analysis and identification of fungal communities living on plaster	University of Milan, Department of Food, Environmental	Postdoc researcher (independent)	Samples collection and preparation, DNA extraction, study of microbial

		and Nutritional Sciences (DeFENS), Milan, Italy	contractor agreement)	communities by molecular methods
September 2014	Evaluation of the effects of zosteric acid on the polysaccharide fraction of extracellular polymeric matrix in microbial biofilm	Programme "Stage in SIMTREA laboratory" funded by the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA)	Postdoc researcher (research prize spent at the University of Florence. Department of Agrifood Production and Environmental Sciences)	In vitro culture of bacterial biofilm both with and without the antifouling agent, exopolysaccharides extraction from the biofilm extracellular polymeric matrix, and quantitative and qualitative analysis of exopolysaccharides
April 2014 – May 2014	Lectureship at the University of Makeni (Sierra Leone).	University of Makeni, Faculty Agriculture and Food Sciences, Makeni, Sierra Leone	Lecturer	Lecturer for the course of Agricultural Microbiology
June 2012 – January 2014	Novel materials for medical devices based on biofunctionalized surfaces with antifouling properties (ANFOMAT, http://www.anfomat.unimi.it/)	University of Milan, Department of Food, Environmental and Nutritional Sciences (DeFENS), Milan, Italy	Postdoctoral fellow (AR)	Evaluation of: 1) antibiofilm activity of natural and synthesized compounds and biofunctionalized materials on model systems of bacterial and fungal infections; 2) molecular/cellular processes altered by antibiofilm activity of compounds; 3) ability of biofunctionalized materials to increase the biofilm susceptibility to antibiotics.
May 2011 – May 2012	New non-toxic antifouling technologies for wastewater filter surfaces	University of Milan, Department of Food Science, Technology and Microbiology (DISTAM), Milan, Italy	Postdoctoral fellow (AR)	Development of an innovative, safe, environmentally friendly and economically sound method to prevent biofouling on wastewater filter surfaces
November 2010 – May 2011	The Milan University's Richini's Courtyard	University of Milan, Department of Food Science,	Postdoctoral fellow (AR)	Study of microbial biodeteriogen communities on surfaces of Richini

		Technology and Microbiology (DISTAM), Milan, Italy		court and on adjacent air
November 2007 - October 2010	The control of deleterious biofilm on abiotic surfaces: from a more sustainable use of biocides to a new environmentally-friendly approach	University of Milan, Department of Food Science, Technology and Microbiology (DISTAM), Milan, Italy	PhD student	Study of new strategies for controlling microbial adhesion and biofilm formation by pathogenic and alternative bacteria on abiotic surfaces
June 2007 – October 2007	Microbial biotechnology applied to the remediation of cultural heritage	University of Milan, Department of Food Science, Technology and Microbiology (DISTAM), Milan, Italy	Fellow	Development of microbial biotechnologies applied to the remediation of cultural heritage
February 2007 – May 2007		R&C Lab S.r.l., Altavilla Vicentina (VI), Italy	Qualified laboratory technician	Samples collection, preparation and analysis. Report writing

Awards received

- Prize “Stage in SIMTREA laboratory” by the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA) to the research project “*Evaluation of the effects of zosteric acid on the polysaccharide fraction of extracellular polymeric matrix in microbial biofilm*”, 20th June 2014.
- Prize given to the MSc thesis by the Province of Trento (Italy), Italy on 26th June 2007.

Teaching activity

Graduate courses leading to a Bachelor or Master of Science degrees:

2019/present “The food - human axis for driving the gut microbiome” (English) at the M.Sc. in Food Sciences for Innovation and Authenticity (lab teaching) (LM-70). Free University of Bolzano-Bozen, Bolzano, Italy. Result of last lectureship evaluation (degree of satisfaction): **definitively yes.**

2018/present “Fermentation processes for the production of mountain wines” (English) at the M.Sc. in Viticulture, Enology and Wine Marketing (LM-69). Free University of Bolzano-Bozen, Bolzano, Italy. Result of last lectureship evaluation (degree of satisfaction): **definitively yes.**

2018/present “Fermentations as tools for making traditional and innovative foods and beverages” (English) at the M.Sc. in Food Sciences for Innovation and Authenticity (lab teaching) (LM-70). Free University of Bolzano-Bozen, Bolzano, Italy. Result of last lectureship evaluation (degree of satisfaction): **definitively yes.**

2018/2019 “Nutrition and Health: the Functional Foods” (English) at the B.Sc. in Agricultural Science. Free University of Bolzano-Bozen, Bolzano, Italy. Result of last lectureship evaluation (degree of satisfaction): **generally yes.**

2013/2014 “Agricultural microbiology” (48 hours, English). Bachelor of Science in Agriculture and Food Technology Sciences at the University of

Makeni (Sierra Leone). Result of last lectureship evaluation: not available.

Courses leading to a PhD of Science degrees:

- 2018/2020 "Food-human axis: the gut microbiome" (English) at PhD course in Food Engineering and Biotechnology. Free University of Bolzano-Bozen, Bolzano, Italy.
- 2018/2020 "Meta-omics approaches to study the food fermentations" (English) at the PhD course in Food Engineering and Biotechnology. Free University of Bolzano-Bozen, Bolzano, Italy.

Lab teaching in graduate courses leading to a Bachelor or Master of Science degrees:

- October 2017-January 2018: course of "Food Microbiology", 24 hours laboratory, degree course in "Agricultural and agro-environmental science". Free University of Bozen, academic years 2017/2018.
- March 2012-May 2013: course of "Microbiology for cultural heritage", 32 hours laboratory, degree course in "Science and Technology for Cultural Heritage Conservation". University of Milan, academic years 2011/2012 and 2012/2013.
- October 2007-December 2008: course of "Agricultural microbiology", 16 hours laboratory, degree course in Agricultural Science and Technology. University of Milan, academic years 2007/2008 and 2008/2009.

Academic lectures in PhD and master courses:

- "Culture and study of biofilm" (5h) in the theoretical course "Biofilm study and environmentally-friendly antifouling strategies" for PhD course in Chemistry, Biochemistry and Ecology of Pesticides, University of Milan, Milano, Italy, March-April 2013.
- "Bacteria for the remediation of cultural heritage" (3h), in the course of "Biology applied to conservation" by Accademy of Fine Arts of Brera, Milano, Italy, 16th July 2013.
- "The removal of chemical alterations from stone by bio-cleaning techniques" (8h), in the course of "The conservation of contemporary arts" by Accademy of Fine Arts of Brera, Milano, Italy, 14th and 21th December 2011.

Non-academic courses:

- "Fundamentals of microbiology", post-A Level course of technician for the restoration of cultural heritage at "ENGIM Veneto – Formazione, Orientamento Cooperazione", Vicenza, Italy, school year 2014, 2016 and 2017.
- "Biotechnologies applied to cultural heritage conservation", refresher course for restorers entitled "Innovative technologies for cleaning, consolidation and protection" funded by Veneto Region, Thiene (VI), Italy, 2012.
- "Microbiology and botany connected to the deterioration of stone surfaces", education course of technician for the reconnaissance and digital elaboration of archaeological stone heritage of Lombardia Region funded by Government Department Responsible for Archeological Monuments of Lombardia Region, Capo di Ponte (BS), Italy, 2012.

Invited academic seminars:

- "Biodeterioration and biorestitution of stone monuments", in the course of "Microbial biotechnology", degree course in "Molecular biotechnology", University of Firenze, Italy, 2th December 2014.
- "Biotechnology applied to the conservation of artworks", in the course of "Biology applied to the analysis and conservation of cultural heritage", degree course in "Methods for the conservation of cultural heritage", University of Genova, Italy, 21th May 2013.

- “Biotechnology to study artworks”, in the course of “Biology applied to the analysis and conservation of cultural heritage”, degree course in “Methods for the conservation of cultural heritage”, University of Genova, Italy, 15th May 2012.
- “The removal of chemical alterations on stone material” in the course of “Biology and microbiology”, degree course in “Science and technology for cultural heritage”, University of Padova, Italy, 24th January 2011.
- “Bioremediation of stone materials” in the course of “Biology and microbiology”, degree course in “Science and technology for cultural heritage”, University of Padova, Italy, 9th December 2009.
- “Biotechnologies for the conservation of cultural heritage” in the course of “Biology and microbiology”, degree course in “Science and technology for cultural heritage”, University of Padova, Italy, 5th December 2008.
- “Bio-cleaning methods for the conservation of cultural heritage” in the course of “Microbiology”, degree course in “Science and technology for cultural heritage”, University of Padova, Italy, 11th January 2008.

Invited non-academic seminars:

- “Biorestauro”, within the programme “Piano formativo fondoimpresa per aumentare la competitività delle imprese lombarde” by Fondazione Enaip Lombardia, Gallarate (VA), Italy, 17th January 2018.
- “Biodeterioration and bioremediation of stone artworks” (5h), professional school of restoration “ENGIM Veneto – Formazione, Orientamento Cooperazione”, Vicenza, Italy, 7th October 2013.
- “Science and technology for the conservation of cultural heritage” on the occasion of “The scientific week” by the “P. Paleocapa” Second Level College of Science, Rovigo, Italy, 6th March 2006.

Degree students co-supervision

Co-supervision of twenty Bachelor and Master theses:

- Marta Manicone, Chiara Traina, Giorgia Pucciani, Anna Salvian, Sofia Targhetta and Valentina Salvini, Master in Food Sciences for Innovation and Authenticity, Free University of Bozen.
- Martina Ben, Bachelor in Biotechnology, University of Parma.
- Francesco Stanghellini, Bachelor in Agriculture and Agro-Environmental Sciences, Free University of Bozen.
- Roberta Tavaglione, Master of Industrial Biotechnology, University of Milano-Bicocca.
- Federica La Rocca and Claudia Romano, Bachelor of Plant, Food and Agro-Environmental Biotechnologies, University of Milan.
- Laura Maria Crippa, Teresa Pedrazzini, Roberta Buono and Fabrizia Cirillo, Bachelor of Science and Technology for Cultural Heritage Conservation, University of Milan.
- Sara Metaldi, Master of Arts in Conservation-Restoration, University of Applied Sciences and Arts of Southern Switzerland (SUPSI).
- Stefania Mastropietro and Gabriele Schiro, Bachelor of Environmental Science, University of Insubria.
- Riccardo Mojara, Bachelor of Material Engineering, Polytechnic of Milan.
- Patrizia Motta, Bachelor of Agricultural Science and Technology, University of Milan.

Other academic responsibilities

Internal appointments to faculty and university boards

- Representative of RTDs researchers at the Faculty of Agricultural, Environmental and Food Sciences, Free University of Bozen, since March 2023.
- Member of the Admission Committee for the Master's degree course in Food Science for Innovation and Authenticity, Free University of Bozen, since academic years 2021/2022.

- External reviewer of thesis for the PhD course in Earth Science (34° cycle) by the University of Milan (2022).
- Evaluator for the First Virtual (XXV) Workshop on the Developments in the Italian PhD research on food science technology and biotechnology by Università degli Studi di Palermo (14-15 September 2021). <https://www.aidic.it/phdfood/>
- Member of the examination board for the course of “Microbiology for Cultural Heritage”, degree course in “Cultural heritage conservation science”, University of Milan, since academic years 2010/2011.

Conferences organization

- Member of the organizing committee for the congress “VIII International Symposium on Sourdough” by the Free University of Bozen. Bozen, 14th-17th June 2022.
- Member of the organizing committee for the congress “III CONVEGNO AISSA#UNDER40” by the Italian Association of the Agricultural Science Societies. Bozen, 14-15 July 2022.
- Member of conference secretariat for the congress “Microbial Diversity 2011 – Environmental stress and adaptation” by the Italian Society for Agriculture, Food and Environmental Microbiology” (SIMTREA). Milan, 26th – 28th October 2011.
- Member of organization board for the congress “Water as a natural resource in a changing environment: quality, threats and sustainable use” by the Free University of Bozen. Bozen, 12th December 2017.

Memberships

- Member of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), associated with FEMS, since March 2014.

Research and scholarships

- Summary of current research and scholarship
Since October 2018, I benefited of full-time RTD-A contracts at the Free University of Bozen (Faculty of Science and Technology). My activity focused on three main topics: a) the food-human axis with the aim to study, through in vitro models, the **human gut microbiome** in response to dietary habits and specifically tailored fermented functional foods, food intake/food conversion, and the microbiome ecology at the intestinal level; 2) the characterization of **microbial biofilms** in fermented foods and in gut environments, with the aim to elucidate structure, composition, properties and architecture; and 3) the **development of new fermented food** and beverages with functional properties, exploiting selected/tailored starters with the final goal to improve fermentation processes.

To this purpose, the **Simulator of the Human Intestinal Microbial Ecosystem** (SHIME) was my main technological tool for in vitro studying of gut microbiota, microbiome and metabolome. In 2019, I participated to the **training course by ProDigest-Gastrointestinal Expertise** (Gent, Belgio) where I learned the use of SHIME. During this position, I also improved my skills with the **confocal laser scanning microscopy** (CLSM) and **molecular methods**, the main methods I adopted for investigating the properties of microbial communities (namely lactic acid bacteria and yeasts) involved in food fermentation. Overall, my technical expertise includes: i) the use of SHIME; ii) culture-mediated and culture independent approaches to investigate the structure of microbial communities; iii) metagenomic and metatranscriptomic approaches to determine the functions of microbial communities; iv) optical, fluorescent, confocal and electron microscopy.

- Summary of research and scholarship during the previous ten years
In the previous 10 years I was postdoc researcher at the Free University of Bozen (2016-2018), project manager for COOPI (International Cooperation) (2015-2016), and postdoc researcher at the University of Milan (2011-2014).
2016-2018: I was postdoc researcher at the Free University of Bozen, in the coordination office of the Transdisciplinary Environment and Health Research Network South Tyrol (TER). Main activities were: the development of TER Network;

the establishment and maintenance of relationships with research partners, institutions and stakeholders; the research of new grant opportunities; the support in projects preparation and submission.

2015-2016: I worked as project manager for COOPI (International Cooperation). The project I lead concerned the food security on rural area of Sierra Leone through the culture of cashew and the study/improvement of the cashew value chain. Particularly, I had the responsibility to ensure the acquisition of the results foreseen by the project in technical as well as economic/financial terms.

2011-2014: I benefited of postdoctoral fellowships in the multidisciplinary research team led by Prof. Francesca Cappitelli. In particular, my research activity was dedicated to ecological studies on microbial communities living on abiotic surfaces and to the study of microbial biofilms. The aims were: to set up a more sustainable practice to use conventional control strategies, and to investigate new strategies to hinder microbial adhesion and biofilm growth, with the final goal of creating effective and safer control strategies as alternative to the traditional biocidal practices.

▪ Summary of significant achievements in research and scholarship

Since I started my research activity, I obtained the PhD scholarship (funded by MIUR), overall 71 months of fellowships and two RTD-A contracts. During this period, I was author of **34 papers in international peer-review journals**, **5 chapters** in books and **18 conference papers**, **1 proceeding edited**. I was **co-supervisor of 22 Bachelor and Master thesis** and **9 PhD students**. I won **2 prizes**: the “Stage in SIMTREA laboratory” prize by the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA, June 2014), and the prize by the Province of Trento (Italy) to MSc thesis that are relevant for the Province of Trento (2006). I formally participated as team member in **42 funded projects** in which I contributed to the project writing and/or implementation and management. In the same period, I have also contributed to the writing of several successful project proposals, although I am not formally involved as team member. In the last 4 years (i.e. during my RTD-A positions), I contributed to preparation and submission of **30 research projects**.

▪ Research grants and contracts

Date granted	Award Holder(s)	Funding Body	Title
2023-25	Free University of Bozen is part of the consortium (A. Polo team member)	MUR (PNRR-)	ONFoods - Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Foods
February 2023 – January 2024	Dr. Andrea Polo and Prof. Raffaella Di Cagno, Free University of Bozen	Company	Survival assays of <i>Bacillus coagulans</i> IS-2 Unique and <i>B. coagulans</i> BC-G44 BioGrowing during infusion, and in vitro assays of persistence and adhesion during gastro-intestinal transit
March 2023 – MAy 2024	Dr. Andrea Polo and Prof. Raffaella Di Cagno, Free University of Bozen	Company	Study of prebiotic effects of Sambucus nigra beverage through the Simulator of the Human Intestinal Microbial Ecosystem (SHIME)
October 2021 – July 2022	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	Company	Effects of different Biga fermentations on digestibility through a dynamically simulated in vitro model

September 2022 – August 2026	Prof. Christophe Courtin Katholieke Universiteit Leuven, Belgium (A. Polo team member of WP2)	Horizon 2020	Innovative pulse and cereal-based food fermentations for human health and sustainable diets (HealthFerm)
December 2021 – December 2024	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	Company	Exploitation of lactic bacteria strains belonging to the Micro4Food Culture Collection and isolation of lactobacillus species from vaginal ecosystem for developing of next generation vaginal probiotics
July 2020 – July 2021	Dr. Andrea Polo, Free University of Bozen (PI)	Free University of Bozen (CRC-RTD 2020)	A pioneering investigation on biofilm by fructophilic lactic acid bacteria: a first step to sketch out potential strategy for the improvement of honeybee health
2020	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Company	Use of selected lactic bacteria for the fermentation of pulses flours: development of biotechnological protocols for the production of fortified bread with pulses of legumes, set-up of fermentation processes and obtaining pre-fermented ingredients for the food industry.
2020-21	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	Company	Production of a vaginal/neonatal psychobiotic gel
2020	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	Company	Survival assays of Bacillus coagulans GANEDEN BC30 during infusion, and in vitro determination of persistence and adhesion during gastrointestinal transit.
2019-20	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Company	Monitoring of microbiological and biochemical features of company products
2019-21	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	Ministerial funding	Management of breeding systems and environmental drivers for the production and exploitation of natural starter in the cheese making process
2020-22	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	FESR-EFRE	Development of an eco-sustainable bioprocessing for making low sugar fruit juices
2021	Prof. Marco Gobbetti, Free	Company	Study of prebiotic effects of selected arabinoxylan-

	University of Bozen (A. Polo team member)		oligosaccharides (AXOS) in a simulator of the human intestinal microbial ecosystem
November 2021 – October 2024	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Free University of Bozen (CRC-RTD 2021)	From South Tyrol food by-products to bioactive peptides: a novel and sustainable bioprocessing to deliver multifunctional foods
2019-22	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Ministerial funding	Bio-preservation of new bakery products with improved nutritional characteristics through the use of agricultural by-products and unconventional plant substrates
2019-22	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	Free University of Bozen	Unravelling the microbiome meta-community: the novel approach for steering cheese making
2020	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Company	Development of sourdough, monitoring and optimization of the baking process
2021	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Company	Investigation of beta-hydroxybutyrate triglyceride (BHB-TG) hydrolysis in dynamically simulated upper GI conditions (stomach and small intestine)
2020-23	Dr. Emanuele Zannini, University College Cork (A. Polo team member of WP)	Horizon 2020	Smart Protein for a Changing World. Future-proof alternative terrestrial protein sources for human nutrition encouraging environment regeneration, processing feasibility and consumer trust and acceptance
2020-22	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Company	Development of a biotechnological protocol for the production of whey and fruit smoothies and fruit-based baby-food preparations
2020-21	Prof. Marco Gobbetti, Free University of Bozen (A. Polo team member)	Company	Sourdough selection for crispbread production from rye flour with improved sensory, rheology and nutritional characteristics
2018-21	Free University of Bozen is part of the consortium (A. Polo team member)	MUR	Pasta and bakery products: integrity, health and sustainability - process and product innovation
2017-20	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	MIUR (PRIN2015)	Processing for healthy cereal foods

2019-20	Prof. Raffaella Di Cagno, Free University of Bozen (A. Polo team member)	Company	Factors affecting the digestibility of the sourdough breads: an in vitro preliminarily characterization
2020	Prof. Marco Gobetti, Free University of Bozen (A. Polo team member)	Company	Sourdough starter strategy
2018-20	Politecnico di Milano (A. Polo team member of WP)	CARIPLO Foundation	A microbe-based value chain: treatment and valorisation of textile wastewater
2017-19	Dr. Lorenzo Brusetti, Free University of Bozen (A. Polo team member)	Free University of Bozen	Patterns of wood-decomposer communities in a montane South Tyrolean forest
2017	Dr. Lorenzo Brusetti, Free University of Bozen (A. Polo team member)	Free University of Bozen	The advantage of teatime at your home field
2015-18	Dr. Lorenzo Brusetti, Free University of Bozen (A. Polo team member)	Free University of Bozen (CRC-RTD 2014)	Leaves degradation in mountain environments
June 2017- January 2019	Dr. Leonardo Montagnani, Free University of Bozen (A. Polo team member)	Free University of Bozen (CRC-RTD 2017)	Temperature sensitivity of heterotrophic respiration in soil: can be teabags weight loss and Acidobacteria density adequate methods for its determination?
January 2017- January 2018	Prof. Stefan Zerbe and Dr Lorenzo Brusetti, Free University of Bozen (A. Polo co-proponent)	Kurt-Eberhard-Bode Foundation	Sustainable Water management and wetland Restoration in settlements of continental-arid Central Asia
2015-2020	Prof. Stefan Zerbe, Free University of Bozen (A. Polo beneficiary of postdoctoral fellowship)	Autonomous Province of Bolzano	Transdisciplinary Environment and Health Research Network South Tyrol
March 2012- February 2014	Prof. Francesca Cappitelli, University of Milan (A. Polo beneficiary of postdoctoral fellowship)	CARIPLO Foundation	Novel materials for medical devices based on biofunctionalized surfaces with antifouling properties

January 2012-December 2013	Prof. Jutta Papenbrock, Leibniz Universität of Hanover, and Prof. Francesca Cappitelli, University of Milan (A. Polo post-doc fellow)	German DAAD and Italian CRUI	Seagrass compounds inhibit biofilm formation - from the identification to the application
Accademic year 2011-2012	Prof. Elisabetta Zanardini, University of Insubria (A. Polo external team member)	University of Insubria (FAR 2011)	Biodeterioration of artworks and selection of microorganisms for biorestitution of historical materials
October 2010-April 2012	Prof. Francesca Cappitelli, University of Milan (A. Polo beneficiary of postdoctoral fellowship)	Fondazione Cassa di Risparmio di Trento e Rovereto	"Nuove tecnologie antifouling non tossiche per sistemi di filtrazione a membrana caratteristici di impianti di depurazione dell'area trentina"
January 2010-June 2011	Prof. Pasquale Tucci, University of Milan (A. Polo beneficiary of postdoctoral fellowship)	CARIPLO Foundation	"Il cortile del Richini (Università degli Studi di Milano, Via Festa del Perdono)"
November 2008-October 2009	Prof. Francesca Cappitelli, University of Milan (A. Polo PhD student)	University of Milan (PUR 2008)	"Ottimizzazione di processi biologici per il trattamento di fanghi di supero dalla depurazione delle acque e per lo smaltimento di scarti dell'industria alimentare con recupero energetico"
Accademic year 2008-2009	Prof. Elisabetta Zanardini, University of Insubria (A. Polo external team member)	University of Insubria (FAR 2008)	Analyses of stone-work biodeterioration and aerobiological characterization of the environment
March 2007-July 2008	Francesco Cellini, Metapontum Agrobios Soc.Consort. A R.L. (SME) (A. Polo beneficiary of fellowship)	Basilicata Region	"Attività di ricerca e trasferimento tecnologico sull'impiego di microrganismi nel settore del risanamento dei beni culturali e di manufatti artistici"
June 2005-December 2007	Prof. Claudia Sorlini, University of Milan (A. Polo team member)	Indian Department of Science and Technology (DST) and Italian	Investigation of stone deteriorating microbial strains and application of bioremediating microbial agents on Indian altered stone monuments

		Ministry of Foreign Affairs (MAE)	
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Publications

*Corresponding,
†co-authorship

Journal articles in refereed peer review academic journals. Journal impact factor (IF) at the submission. **Current records** (March 2022): **34 publications and 14 h-index by Scopus**, (<https://www.scopus.com/authid/detail.uri?authorId=7005680230>); 41 publications and 14 h-index by Web of Science (<https://www.webofscience.com/wos/author/record/38111255>); 57 publications and 16 h-index by Google Scholar (https://scholar.google.it/citations?hl=it&user=P4YqM2YAAAAJ&view_op=list_works&citft=1&email_for_op=a.polo8209%40gmail.com&gmla=AJsN-F5JwCT_yT0e5er8DqRrq7fHKhoGaziGvjtbrmu1NwZKAn5uDeldj95nsPcM6t1_m_ZJgJKu8aCzapJBVzWin3AcUeSfRO17q2qPDzVg79ARfrAl6QCbe7U9R3fu6VppdFV_Dc73sDxsD5gzhn7cTqDCG1JEXaw).

1. **Polo A.***, Acin-Albiac M., Da Ros A., Nolla Ardèvol V., Nikoloudaki O., Verté F., Di Cagno R., Gobbetti M. (2023). The effect of hydrolyzed and fermented arabinoxylan-oligosaccharides (AXOS) intake on the middle-term gut microbiome modulation and its metabolic answer. *Nutrients*, 15(3), 590. IF (2022) 6,706. DOI: 10.3390/nu15030590
2. **Polo A.***, Tlais A.Z.A., Filannino P., Da Ros A., Arora K., Cantatore V., Vincentini O., Nicolodi A., Nicolodi R., Gobbetti M., Di Cagno R. (2023). Novel Fermented Ice Cream Formulations with Improved Antiradical and Anti- Inflammatory Features, *Fermentation*, 9(2), 117. IF (2022) 5,123. DOI: 10.3390/fermentation9020117
3. Cappello C., Acin-Albiac M., Pinto D., **Polo A.**, Filannino P., Rinaldi F., Gobbetti M., Di Cagno R. (2023). Do nomadic lactobacilli fit as potential vaginal probiotics? The answer lies in a successful selective multi-step and scoring approach. *Microbial Cell Factories*, 22(1), 27. IF (2022) 6,352. DOI: 10.1186/s12934-023-02030-4
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8. Da Ros A., **Polo A.**, Rizzello C.G., Acin-Albiac M., Montemurro M., Di Cagno R., Gobbetti M. (2021). Feeding with sustainably sourdough bread has the potential to promote the healthy microbiota metabolism at the colon level. *Microbiology Spectrum*, 9(3), e0049421. IF (2021) 7,171. DOI: 10.1128/Spectrum.00494-21.
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 12. Borruso L., Bani A., Pioli S., Ventura M., Panzacchi P., Antonielli L., Giammarchi F., **Polo A.**, Tonon G., Brusetti L. 2021. Do aerial nitrogen depositions affect fungal and bacterial communities of oak leaves? *Frontiers in Microbiology*, 12, 633535. IF (2021) 4,076. DOI: 10.3389/fmicb.2021.633535
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 15. Tlais A.Z.A., Fiorino G.M., **Polo A.**, Filannino P., Cagno R.D. 2020. High-value compounds in fruit, vegetable and cereal byproducts: An overview of potential sustainable reuse and exploitation. *Molecules*, 25, 2987. IF (2019) 3,267. DOI: 10.3390/molecules25132987
 16. Di Cagno R., Filannino P., Cantatore V., **Polo A.**, Celano G., Martinovic A., Cavoski I., Gobbetti M. 2020. Design of potential probiotic yeast starters tailored for making a cornelian cherry (*Cornus mas* L.) functional beverage. *International Journal of Food Microbiology*, 323. IF (2020) 4,187. DOI: 10.1016/j.ijfoodmicro.2020.108591
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Chapters in books

35. Ameer H., Arora K., **Polo A.**, Gobbetti M. 2022. "The Sourdough Microbiota and Its Sensory and Nutritional Performances" in "Good Microbes in Medicine, Food Production, Biotechnology, Bioremediation". Editors: Frans J. de Bruijn, Hauke

- Smidt, Luca S. Cocolin, Michael Sauer, David Dowling, Linda Thomashow. Publisher: John Wiley & Sons Ltd, Chichester, 169-184. ISBN 9781119762461
36. Molin G., **Polo A.** 2018. "Studio conservativo dei resti mortali di Francesco Petrarca" in „Imago animni – volti dal passato“. Editors: Luca Bezzi, Nicola Carrara, Marcello Nebl. Publisher: Litografia EFFE e ERRE, Trento, 47-52. ISBN 978-88-9776055-9
37. Cappitelli F., **Polo A.**, Troiano F. 2015. "Indagini microbiologiche sui manoscritti della Certosa di Pavia e dell'aria" in "La Certosa di Pavia. Tecnologie integrate per la conoscenza e la conservazione. Recenti scoperte nei locali inaccessibili". Editors: Marco Martini, Carla Simone, Goffredo Haus, Pasquale Tucci, Maria Teresa Mazzilli Savini, Marco Morandotti, Susanna Bortolotto e Gabriele Guidi. Publisher: Silvana Editoriale ed., Cinisello Balsamo (Mi), 232-239. ISBN: 9788836631933
38. Cappitelli F., **Polo A.**, Sorlini C., Santo N., Fascio U., Di Benedetto C., De Bernardi F. 2013. "Indagini microbiologiche sulle superfici e sull'aria del Cortile" in "Il cortile del Richini un monumento da conservare". Editors: Antonello Negri, Pasquale Tucci. Publisher: Skira, Milano, 211-220. ISBN: 885722214
39. Cappitelli F., **Polo A.**, Sorlini C. 2012. "Indagini microbiologiche delle superfici del cortile e dell'aria" in "Il cortile del Richini, un piano di conservazione programmata". Publisher: Università degli Studi di Milano, Milano, 85-90. DOI (book): 10.4465/2012_PROGETTORICHINI; DOI (chapter): 10.4465/2012_PROGETTORICHINI_Cappitelli_Polo_Sorlini

Conference papers and abstracts

40. Nikoloudaki O., **Polo A.**, Da Ros A., Acin Albiac M., Verté F., Di Cagno R., Gobbetti M. 2022. Gut microbiota modulation upon digestion of cereal-based products containing arabinoxylan-oligosaccharides using the Simulator of Human Intestinal Microbial Ecosystem (SHIME). In "VIII International Symposium on Sourdough. Resilience, Sustainability, Wellness", proceedings of the congress, 14th – 17th June 2022, Bolzano (Italy). Editors Marco Gobbetti, Elke Arendt, Markus Brandt, Bernard Genot, Michael Gänzle, Kati Katina, Emanuele Zannini, Bernard Onno, Ömer Şimşek, Rudi F. Vogel, Luc De Vuyst, Luciana Jimenez, 21-22.
41. **Polo A.**, Da Ros A., Rizzello C.G., Acin-Albiac M., Montemurro M., Di Cagno R., Gobbetti M. 2022. Feeding with sustainably sourdough bread promotes healthy microbiota metabolism at the colon level. In "VIII International Symposium on Sourdough. Resilience, Sustainability, Wellness", proceedings of the congress, 14th – 17th June 2022, Bolzano (Italy). Editors Marco Gobbetti, Elke Arendt, Markus Brandt, Bernard Genot, Michael Gänzle, Kati Katina, Emanuele Zannini, Bernard Onno, Ömer Şimşek, Rudi F. Vogel, Luc De Vuyst, Luciana Jimenez, 56-57.
42. Ameer H., **Polo A.**, Tlais A.Z.A., Cozzi S., Paganoni C., Di Cagno R., Gobbetti M. 2022. Design of tailored sourdough for making rye crispbread with improved sensory and nutritional features. In "VIII International Symposium on Sourdough. Resilience, Sustainability, Wellness", proceedings of the congress, 14th – 17th June 2022, Bolzano (Italy). Editors Marco Gobbetti, Elke Arendt, Markus Brandt, Bernard Genot, Michael Gänzle, Kati Katina, Emanuele Zannini, Bernard Onno, Ömer Şimşek, Rudi F. Vogel, Luc De Vuyst, Luciana Jimenez, 110-111.
43. **Polo A.**, Tlais A.Z.A., Filannino P., Cantatore V., Gobbetti M., Di Cagno R. 2022. The role of biofilm in protecting fructophilic lactobacilli bee symbionts from agrochemicals stressors. In: "Book of abstract. FEMS 2022. Congress of European Microbiologists". FEMS, Belgrado, 30.6.2022 - 02.7.2022.
44. **Polo A.**, Da Ros A., Rizzello C.G., Acin-Albiac M., Montemurro M., Di Cagno R., Gobbetti M. 2022. Feeding with Sustainably Sourdough Bread Has the Potential to Promote the Healthy Microbiota Metabolism at the Colon Level. In: "Book of

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45. **Polo A.**, Tlais A.Z.A, Filannino P., Cantatore V., Gobbetti M., Di Cagno R. 2021. Biofilm formation as an extra gear for *Apilactobacillus kunkeei* to counter the threat of agrochemicals in honeybee gut. In "Microbial Diversity 2021 – Advances in microbial diversity", proceedings of the congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), 14th – 15th December 2021 (Virtual Congress).
46. **Polo A.**, Da Ros A., Rizzello C.G., Acin-Albiac M., Montemurro M., Di Cagno R., Gobbetti M. 2021. Feeding with sustainably sourdough bread has the potential to promote the healthy microbiota metabolism at the colon level. In "Microbial Diversity 2021 – Advances in microbial diversity", proceedings of the congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), 14th – 15th December 2021 (Virtual Congress).
47. **Polo A.**, Filannino P., Ehrmann M., Jacob F., Di Cagno R., Gobbetti M. 2019. Fructophilic lactic acid bacteria: a study on biofilms and exopolysaccharides production and structure. In "Microbial Diversity 2019 – Drivers of microbial diversity", proceedings of the congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), 25th – 27th September 2019, Catania.
48. Tlais A.Z.A., Di Cagno R., Filannino P., Vincentini O., Rohn S., **Polo A.**, Gobbetti M. 2019. Tailored biotransformation of apple by-products: a novel method for producing shikimic acid. In: "Book of abstract. FEMS 2019. 8th Congress of European Microbiologists". FEMS, Glasgow, 7.7.2019 - 11.7.2019, p 131.
49. Pioli S., Bani A., Borruso L., **Polo A.**, Brusetti L. 2018. Microbial decomposer dynamics: Diversity and functionality in litter and deadwood of South Tyrolean forests. In "10° convegno sulla ricerca zoologica e botanica in Alto Adige", Bolzano 6th – 7th September 2018, Bolzano (Italy). Editor: Museo Scienze Naturali in Alto Adige. Handle: <https://hdl.handle.net/10863/6556>
50. **Polo A.**, Cappitelli F., Villa F., Pinzari F. 2017. Fungal communities in library archives and the conservation of stored manuscripts: the case study of the archive of the University of Milan. In "Microbial Diversity 2017 – Drivers of microbial diversity", proceedings of the congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), 24th – 26th October 2017, Bari (Italy). Editors: Maria Calasso, Luca Cololin, Daniele Daffonchio, Maria De Angelis, Marco Gobbetti, Sylvie Lortal, Fabio Minervini, Erasmo Neviani, Carlo Giuseppe Rizzello. Publisher: SIMTREA, San Casciano Val di Pesa (Fi), 466-467. ISBN: 978-88-943010-0-7
51. **Polo A.** 2014. "Biorestauro: batteri alleati dell'uomo nella conservazione delle opere d'arte". Proceedings of the congress "I cippi di confine della Veneranda Arca del Santo di Anguillara Veneta – Atti delle giornate di studio", conference organised by Palinsesti Onlus Association, 10th – 11th October 2013, Anguillara Veneta (Italy). Editors: Serena Franceschi, Adelmo Lazzari. Publisher: Gieffe Edizioni srl, 51-54. ISBN:978-88-940847-0-2
52. **Polo A.**, Cappitelli F., Sorlini C. 2014. "Biorestauro: batteri alleati dell'uomo nella conservazione delle opere d'arte". Proceedings of the congress "I batteri nel restauro. I principi, l'esperienza di laboratorio e i casi studio applicati dalla biopulitura al bioconsolidamento", congress organized by Villa Fabris Foundation, 28th September 2013, Thiene (Italy). Editors: L. Becagli, S. Metaldi. Publisher: il prato, 9-12. ISBN: 978-88-6336-236-7
53. Cappitelli F., Cattò C., Villa F., **Polo A.**, Forlani F., Dell'Orto S., Gelain A., Villa S. 2013. Exploring the anti-biofilm activity of zosteric acid via high-throughput screening of a small molecules scaffold-based library. In "Microbial Diversity 2013 – Microbial Interactions in Complex Ecosystems", proceedings of the congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), 23th – 25th October 2013, Torino (Italy).

54. Cattò C., Baroni S., Villa F., **Polo A.**, Cappitelli F., Dell'Orto S., Gelain A., Villa S., Vitali A., Forlani F. 2013. Exploring molecular targets and pathways involved in the antibiofilm activity of zosteric acid related structure by a multi-strategy proteomic approach. In "57th National Meeting" by the Italian Society of Biochemistry and Molecular Biology (SIB)", proceeding of congress, 18th – 20th September 2013, Ferrara (Italy).
55. Gulotta D., Bertoldi M., Bortolotto S., **Polo A.**, Cappitelli F., Toniolo L. 2012. The Richini Courtyard in Milan: characterisation of the restoration materials and decay evaluation. In "A.I.Ar. 2012 – VII° Congresso Nazionale di Archeometria", proceedings of the congress of the A.I.Ar Associazione Italiana di Archeometria, 22th – 24th February 2012, Modena (Italy). Editors: G. Vezzalini, P. Zannini. 1-8.
56. **Polo A.**, Cappitelli F., Giacomucci L., Troiano F., Cattò C., Sorlini C. 2011. Alterative microorganisms living on stone artworks exposed to environmental stress conditions. In "Microbial Diversity 2011 – Environmental stress and adaptation", proceedings of the congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), 26th – 28th October 2011, Milano (Italy). Editors: S. Casella, D. Daffonchio, M. Gobbetti, E. Parente. Publisher: SIMTREA, San Casciano Val di Pesa (Fi), 23-26.
57. Villa F., **Polo A.**, Principi P., Giacomucci L., Cappitelli F. 2009. New environmental friendly approaches against detrimental biofilms. In "The role of microbiology in agricultural, food and and environmental fields", proceedings of the Second National Conference SIMTREA 10th – 12th June 2009, Sassari (Italy). Annals of Microbiology 59, Special Issue, 108.

Proceeding – edited

58. Water as a natural resource in a changing environment: quality, threats and sustainable use. Borruso L., Plagg B., **Polo A.**, Brusetti L., Zerbe S. (Eds.) 2017. Proceedings of TER congress (12th December 2017), Free University of Bozen.

Presentations at national and international scientific conferences (invited or selected speaker)

- "Feeding with sustainably sourdough bread promotes healthy microbiota metabolism at the colon level" in VIII International Symposium on Sourdough. Resilience, Sustainability, Wellness, 14th – 17th June 2022, Bolzano (Italy).
- "Tailored biotransformation of apple by-products as a source of nutritional supplement" in FEMS 2019. 8th Congress of European Microbiologists. FEMS, 7th – 11th July .2019, Glasgow (Scotland).
- "Alterative microorganisms living on stone artworks exposed to environmental stress conditions" in "Microbial Diversity 2011 – Environmental stress and adaptation", congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA), 26th – 28th October 2011, Milan (Italy).
- "Microbiological analysis on biofilms" in "Novel material for medical devices based on biofunctionalized surfaces with antifouling properties", congress of ANFOMAT (Antifouling Materials) research project, University of Milan, 21th February 2014, Milan (Italy).
- "TER - Transdisciplinary Environment and Health Research Network South Tyrol" in "Transformative research and development in urban and regional environment" congress, 1th – 3th September 2016, Brixen (Italy).
- "Bacteria for the remediation of stone artworks" in "The boundary stones of *Veneranda Arca del Santo*", conference organized by Palinese Onlus Association, 10th – 11th October 2013, Anguillara Veneta (Italy).
- "Bacteria: partners for the conservation of artworks" in "Bacteria and conservation science", congress organized by Villa Fabris Fondation, 28th September 2013, Vicenza (Italy).

Training and update (conference)

- 30th June – 2nd July 2022. The Federation of European Microbiological Societies (FEMS) Conference 2022, Belgrado (Serbia).

participation and courses attendance)

- 14th – 15th December 2021. “Microbial Diversity 2021 – Advances in microbial diversity”, congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA). Virtual event.
- 25th – 27th September 2019. “Microbial Diversity 2019 – Microbial diversity as a source of novelty: function, adaptation and exploitation”, congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA). Catania, Italy.
- 7th – 11th January 2019. Training course for the Simulator of the Human Intestinal Microbial Ecosystem (SHIME), by ProDigest-Gastrointestinal Expertise, Gent, Belgium.
- 24th July 2019. Training course for Confocal Laser Scanning Microscopy, by Leica, Bozen, Italy.
- 24th – 26th October 2017. “Microbial Diversity 2017 – Drivers of microbial diversity”, congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA). Bari, Italy.
- 4th – 8th Jun 2017. “14th Symposium on Bacterial Genetics and Ecology”, BAGECO 14, Aberdeen, Scotland.
- 1st – 3th September 2016. “Transformative research and development in urban and regional environment”, by Unibz, Bressanone (BZ), Italy.
- 18th – 20th September 2013. “57th National Meeting” by the Italian Society of Biochemistry and Molecular Biology (SIB). Ferrara, Italy.
- 10th May 2013. “Biology applied to cultural heritage: from diagnosis to conservation treatments” by the Center for Conservation and Restoration “la Venaria Reale”, Venaria (TO), Italy.
- 26th – 28th October 2011. “Microbial Diversity 2011 – Environmental stress and adaptation”, congress of the Italian Society for Agriculture, Food and Environmental Microbiology (SIMTREA). Milano, Italy.
- 2nd – 5th September 2009. “Eurobiofilms 2009” by Federation of European Microbiological Societies (FEMS), Roma, Italy.
- 31st May – 4th June 2009. “International Summer School 2009. New goals on environmental science” by the Italian Research Group on Pesticides and Environment (GRIFA), Villasimius (CA), Italy.
- 14th – 19th September 2008. “International Summer School 2008. Crop systems, Forestry, and Environmental Sciences” by the Italian Research Group on Pesticides and Environment (GRIFA), Metaponto (MT), Italy.
- 21st May 2008. “From RNA extraction to data analysis” by Applied Biosystems, University of Milan, Milan, Italy.
- 19th May 2008. “Meeting on confocal microscopy” by Department of Human Morphology (DMU), University of Milan, Milan, Italy.

Other titles

- 2022. Recognized language certificate of the **German level A2**, Goethe Institute.
- 2021. Recognized language certificate of the **English level C1**, thorough internal C1 exam by the Language Centre of the Free University of Bozen-Bolzano.
- 2011. “Cultore della Materia” for the disciplines afferent to AGR/16 field assigned by the “Consiglio di Coordinamento Didattico” of Agricultural Faculty. University of Milan.
- 2016. “Qualifica di collaboratore restauratore di beni culturali - tecnico del restauro” by the Ministry of Cultural Heritage and Activities and Tourism (MiBACT)
- Degree in oboe (10/10) on 28th February 2005 by “F. Venezia” Conservatory in Rovigo, Italy.

Third mission

- Participation at the Open Day for Schools by the NOI TechPark with guided tours of Micro4Food platform labs (Edition March 2023).
- Participation at “Onde Vagabonde” broadcast by Radio Rai (9/2/2023) <http://www.raialtoadige.rai.it/it/index.php?media=Pra1675945500>.

- Contribute (video interview) to the MicrobiomeSupport (HORIZON 2020) documentary movie <http://www.microbiomesupport.eu/documentary-movie/> (December 2022)
- Interview to Dolomiten newspaper, 16 November 2022.
- Interview to AltoAdige newspaper, 16 November 2022.
- Interview to “Accademia” magazine (#84 12/2022) titled “SHIME, l’intestino virtuale del laboratorio Micro4Food”, November 2022.
- Presentation of Micro4Food platform and labs to Grisons government delegation, by the Presidium Protocol and Ceremonial Department of the Autonomous Province of Bozen (November 2022).
- Participation at the Open Day for Schools by the NOI TechPark with guided tours of Micro4Food platform labs (Edition November 2022).
- Organization of “Fermentazione del Cibo: dal passato direttamente nel futuro?” event (round table discussion open to citizens) within the “RI-NUTRI. Ripensare la Nutrizione” project by UPAD Cultural Association (2022)
- Guided visit of Micro4Food platform in occasion of visit by the U. S. Consul General Robert Needham at the NOI Techpark in Bozen-Bolzano, South Tyrol, (2022).
- Articolo divulgativo “Mikrobielle Fermentation: ein nachhaltiger Weg, um die Agrar- und Ernährungsressourcen des Planeten zu ernähren und zu verbessern“ in “Agrar- und Forstbericht 2021“ (2021).
- Guided Tours of Micro4Food platform for Master students of the University of Innsbruck – Institute of Microbiology, organised by NOI TechPark (2021 and 2022)
- Participation to Lab 4 Business Food Technologies, workshop organized by NOI TechPark to promote the technology transfer and to support the meeting between research and companies (2021).
- Guided Tours of Micro4Food platform for Companies organised by NOI TechPark (ca. 12 per year, since 2019).
- Video-interview by NOI TechPark to disseminate examples of cooperations between University and companies (2021) https://www.instagram.com/tv/CUNTwftjO3-/?utm_medium=share_sheet.
- Participation to Family Bakers & Fulvio Marino broadcast (2021).
- Contribution to the Immersive video installation on sourdough by Katrin Hornek, visual art on artistic research (2021).
- Participation to UNLOCK POTENTIAL, promotional events focused on Food and Green organized by NOI TechPark in cooperation with workers and companies associations (lvh.apa, SBB, Rete Economia, UVS) (2021).
- Interview for TG Leonardo (2019).
- Interview for TGR (2019).
- Interview for Interpoma broadcast (2019).

Research and training activity in qualified international Institutions

Research experience in foreign laboratories

- May 2012. Research stay in the framework of the “VIGONI” program of the DAAD “Seagrass compounds inhibit biofilm formation – from the identification to the application”, at the Institut für Botanik, Leibniz Universität of Hanover, Germany, under the supervision of Prof.ssa Jutta Papenbrock. The aim of this research stay was to study the methods how to prepare and analyze plant samples mainly for phenolic compounds by HPLC.
- January 2010 – May 2010. Internship research at the Department of International Health, Immunology and Microbiology, Faculty of Health Sciences (Panum Institute), University of Copenhagen, Denmark, under the supervision of Prof. Niesl Høiby and Prof. Thomas Bjarnsholt. Title of the internship research project: “In vivo effects of photoactivated titanium dioxide on microbial biofilms”.
- August – September 2007. Research stay in the framework of the international project *CHCRT-2* “Investigation of stone deteriorating microbial strains and application of bioremediating microbial agents on Indian altered stone monument”,

Agra, India. The aim of this research stay was to collect samples of alteration of Indian monuments and to teach how to carry out biomolecular analysis on cultural heritage samples.

Further data Reviewer of international journals

- Microorganisms.
- Microbial Ecology.
- Plos One.
- Molecules.
- Journal of Cereal Science.
- Annals of Microbiology.
- Journal of Cultural Heritage.

Scientific missions

- April 2008 – May 2008. Assigned to write the preliminary project “Bio-restoration” in relation to the TECNOPRIMI project realized by AIRI (Italian Association Industrial Research) and Municipality of Milan.

Language competence

First tongue: **Italian**

English: **Recognized language certificate of the English level C1**, thorough internal C1 exam by the Language Centre of the Free University of Bozen-Bolzano.

German: **Recognized language certificate of the German level A2**, Goethe Institute.

Other language (Self-assessment *European level based on Common European Framework of Reference for Languages*):

		Understanding				Speaking				Writing	
		Listening		Reading		Spoken interaction		Spoken production			
French	B2 Independent User	C1 Proficient User	C1 Proficient User	B1 Threshold or intermediate	B1 Threshold or intermediate	B1 Threshold or intermediate	B1 Threshold or intermediate	A2 Threshold or intermediate	A2 Threshold or intermediate	A2 Threshold or intermediate	A2 Threshold or intermediate
English	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User	C1 Independent User
German	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User

Date

31 March 2023