CURRICULUM VITAE

EUROPEAN FORMAT

PERSONAL INFORMATION

Name, Surname	Paola Di Donato
Telephone	+39 [redacted]
E-mail	p[redacted]
Nationality	Italian

WORK EXPERIENCE

Dates (from – to)	2008- present
Name and address of employer	"Parthenope" University of Naples, Italy
Type of business or sector	Department of Science and Technology
Occupation or position held	Professor in Biochemistry (SSD BIO/10)

Dates (from – to)	2008- present
Name and address of employer	National Research Council of Italy
Type of business or sector	Institute of Biomolecular Chemistry
Occupation or position held	Associate Researcher

ACADEMIC DUTIES

Dates (from – to)	2015- present
Name and type of organisation	University of Naples "Parthenope"
Activity	Delegate of the Rector to the management of institutional repository of research IRIS and to the coordination of University's participation to the Italian Research Evaluation assessment for the periods 2011-2014 (VQR 11-14) and 2015-2019 (VQR 15-19)

Dates (from – to)	2022-present
Name and type of organisation	University of Naples "Parthenope"
Activity	Professor in Astrobiology

Dates (from – to)	2021-present
Name and type of organisation	University of Naples "Parthenope"
Activity	Professor in Applied Biochemistry

Dates (from – to)	2008-present
Name and type of organisation	University of Naples "Parthenope"
Activity	Professor in Biochemistry

Dates (from – to)	2023- present
Name and type of organisation	University of Venice "Ca 'Foscari"
Activity	Member of the Scientific Board of the Italian National PhD Programme in Polar Sciences
Dates (from – to)	2008- 2019
Name and type of organisation	University of Naples "Parthenope"
Activity	Member of the Scientific Board of the international PhD Course "Environment, Resources and Sustainable Development"

RESEARCH ACTIVITIES

Research sectors	Green Chemistry; Extremophilic microorganisms; Astrobiology
Recent Scientific Activities	Re-use of vegetable biomass for the production of energy and the recovery of value added chemicals. Study of biological and biotechnological applications of biomolecules (polysaccharides and polyphenols) from agroindustry wastes; Study of microbial exopolysaccharides (with particular regard to those from the extremophilic microorganisms); Study of extremophiles' adaptation in space conditions
Participation in Research Projects	2020-present: Research Unit Leader of the project PNRA19_ 00073 - A2 funded by the Italian Antarctic Research Program, Call 2016 –Line A2 "TErra NOva bay polynya high Resolution Experiment – TENORE". 2017-2019 Principal Investigator of the project PNRA16_00274 funded by the Italian Antarctic Research Program, Call 2016 –Line A1 - A1 "Trophic and symbiotic relationships among bacteria, macrobenthos and meiobenthos in Antarctic environments". 2018: Participation as independent researcher to the International STARLIFE research project, an international campaign for the study of the role of galactic cosmic radiation in astrobiological model systems, led by dr. Ralf Moeller Group leader of the Space Microbiology Research Group, German Aerospace Center (DLR e.V.), Institute of Aerospace Medicine, Radiation Biology Department, Köln/Cologne, Germany. 2017: VISITING SCIENTIST at the Institute of Microbiology Bulgarian Academy of Sciences (BAS), Sofia, Bulgaria for the project "Exopolysaccaharide from halophiles: production, chemical characterization and their possible biotechnological applications" funded in the frame of the bilateral agreement CNR-BAS (Italy-Bulgaria) 2012-2014: Coordinator of the Research activity "Ottimizzazione dei sistemi di estrazione di antiossidanti (di natura fenolica e lipidica) e polisaccaridi dalle biomasse lignocellulosiche e loro identificazione" for the Project PON01_01966 dal titolo: "Integrated agro-industrial chains with high energy efficiency for the development of eco-compatible processes of energy and biochemicals production from renewable sources and for the land valorisation-ENERBIOCHEM" 2012: VISITING SCIENTIST to Marmara University of Istanbul, Turkey; for the Bilateral project Italy-Turkey MAE-TUBITAK "Extremophiles for Next-Generation Biofuels" protocol number M00192. 2009: VISITING SCIENTIST to the Latvian Institute of Wood Chemistry of Riga, Lettonia, for the UE 7th Framework Programme "The implementation of research potential of the Latvian state institute of wood chemistry in the European research area (WOOD-NET)" Grant Agreement No. 203459"

ARTICLES AND BOOK CHAPTERS

Finore, I., Feola, A., Russo, L., Cattaneo, A., Di Donato, P., Nicolaus, B., Poli, A., Romano, I. Thermophilic bacteria and their thermozymes in composting processes: a review. (2023) Chemical and Biological Technologies in Agriculture, 10 (1), art. no. 7.

Romano, I., Vitiello, G., Gallucci, N., Di Girolamo, R., Cattaneo, A., Poli, A., Di Donato, P. Extremophilic Microorganisms for the Green Synthesis of Antibacterial Nanoparticles (2022) Microorganisms, 10 (10), art. no. 1885.

Romano, I., Camerlingo, C., Vaccari, L., Birarda, G., Poli, A., Fujimori, A., Lepore, M., Moeller, R., Di Donato, P. Effects of Ionizing Radiation and Long-Term Storage on Hydrated vs. Dried Cell Samples of Extremophilic Microorganisms (2022) Microorganisms, 10 (1), art. no. 190.

Venezia, V., Pota, G., Silvestri, B., Vitiello, G., Di Donato, P., Landi, G., Mollo, V., Verrillo, M., Cangemi, S., Piccolo, A., Luciani, G. A study on structural evolution of hybrid humic Acids-SiO2 nanostructures in pure water: Effects on physico-chemical and functional properties (2022) Chemosphere, 287, art. no. 131985.

Semprucci, F., Appolloni, L., Grassi, E., Donnarumma, L., Cesaroni, L., Tirimberio, G., Chianese, E., Di Donato, P., Russo, G.F., Balsamo, M., Sandulli, R. Antarctic special protected area 161 as a reference to assess the effects of anthropogenic and natural impacts on meiobenthic assemblages (2021) Diversity, 13 (12), art. no. 626.

Pagliara, V., De Rosa, M., Di Donato, P., Nasso, R., D'errico, A., Cammarota, F., Poli, A., Masullo, M., Arcone, R. Inhibition of interleukin-6-induced matrix metalloproteinase-2 expression and invasive ability of lemon peel polyphenol extract in human primary colon cancer cells (2021) Molecules, 26 (23), art. no. 7076.

Finore, I., Romano, I., Leone, L., Di Donato, P., Nicolaus, B., Poli, A., Lama, L. Biomass valorization: Sustainable methods for the production of hemicellulolytic catalysts from thermoanaerobacterium thermostercoris strain buff (2021) Resources, 10 (11), art. no. 115.

Silvestri, T., Immirzi, B., Dal Poggetto, G., Di Donato, P., Mollo, V., Mayol, L., Biondi, M. How poloxamer addition in hyaluronic-acid-decorated biodegradable microparticles affects polymer degradation and protein release kinetics (2021) Applied Sciences (Switzerland), 11 (16), art. no. 7567.

De Lise F.,Iacono R., Strazzulli A., Giglio R., Curci N., Maurelli L., Avino R., Carandente A., Caliro S., Tortora A., Lorenzini F., Di Donato P. Moracci M., Cobucci-Ponzano B (2021) Transcript regulation of the recoded archaeal α-l-fucosidase in vivo. Molecules 26(71), Article number 1861

Acer O., Guven K., Poli A., Di Donato P., Leone L., Buono L., Guven R.G., Nicolaus B., Finore I. (2020) Acinetobacter mesopotamicus sp. nov., Petroleum-degrading Bacterium, Isolated from Petroleum-Contaminated Soil in Diyarbakir, in the Southeast of Turkey. Current Microbiology 77(10), 3192 - 3200

Finore I., Vigneron A., Vincent W.F., Leone L., Di Donato P., Moriello A.S., Nicolaus B., Poli A. (2020) Novel psychrophiles and exopolymers from permafrost thaw lake sediments Microorganisms 8(9), 1 – 15, Article number 1282

Joulak I. ,Finore I., Poli A., Abid Y., Bkhairia I., Nicolaus B., Di Donato P., Dal Poggetto G., Gharsallaoui A., Attia H., Azabou S. (2020) Hetero-exopolysaccharide from the extremely halophilic Halomonas smyrnensis K2: production, characterization and functional properties in vitro. 3 Biotech 10(91), Article number 395

Camerlingo C., Di Meo G., Lepore M., Lisitskiy M., Poli A., Portaccio M., Romano I., Di Donato P. (2020) Graphene-based and surface-enhanced raman spectroscopy for monitoring the physio-chemical response of thermophilic bacterial spores to low temperatures exposure Sensors 20(15), 1 – 101, Article number 4150

Pota G., Venezia V., Vitiello G., Di Donato P., Mollo V., Costantini A., Avossa J., Nuzzo A., Piccolo A., Silvestri B., Luciani G. (2020) Tuning functional behavior of humic acids through interactions with stöber silica nanoparticles Polymers 12(41), Article number 982

Di Donato P., Taurisano V., Poli A., Gomez d'Ayala G., Nicolaus B., Malinconinco M., Santagata G. (2020) Vegetable wastes derived polysaccharides as natural eco-friendly plasticizers of sodium alginate Carbohydrate Polymers 229, Article number 115427

Pagliara V., Nasso R., Di Donato P., Finore I., Poli A., Masullo M., Arcone R (2019) Lemon peel polyphenol extract reduces interleukin-6-induced cell migration, invasiveness, and matrix metalloproteinase-9/2 expression in human gastric adenocarcinoma mkn-28 and ags cell lines Biomolecules 9(12), Article number 833

Ventorino V., Nicolaus B., Di Donato P., Pagliano G., Poli A., Robertiello A., Iavarone V., Pepe O. (2019) Bioprospecting of exopolysaccharide-producing bacteria from different natural ecosystems for biopolymer synthesis from vinasse Chemical and Biological Technologies in Agriculture 6(1), Article number 18

Di Donato P., Finore I., Poli A., Nicolaus B., Lama L. (2019) The production of second generation bioethanol: The biotechnology potential of thermophilic bacteria Journal of Cleaner Production 233, 1410 - 1417

Vitiello G., Melone P., Silvestri B., Pezzella A., Di Donato P., D'Errico G., Di Napoli M., Zanfardino A., Varcamonti M., Luciani G (2019) Titanium based complexes with melanin precursors as a tool for directing melanogenic pathways Pure and Applied Chemistry 91(10), 1605 - 1616

Finore I., Lama L., Di Donato P., Romano I., Tramice A., Leone L.,Nicolaus B., Poli A. (2019) Parageobacillus thermantarcticus, an antarctic cell factory: From crop residue valorization by green chemistry to astrobiology studies. Diversity 11 (81), Article number 128

Boccia, Flavio; Di Donato, Paola; Covino, Daniela; Poli, Annarita. (2019) Food Waste And Bio-Economy: A scenario for the Italian Tomato Market. Journal of Cleaner Production 227, 424-433. DOI: 10.1016/j.jclepro.2019.04.180

Caruso, Consolazione; Rizzo, Carmen; Mangano, Santina; Poli, Annarita; Di Donato, Paola; Nicolaus, Barbara; Finore, Ilaria; Di Marco, Gaetano; Michaud, Luigi; Lo Giudice, Angelina. (2019) Isolation, characterization and optimization of EPSs produced by a cold-adapted Marinobacter isolate from Antarctic seawater. Antarctic Science 31(2), 69-79. Doi: 10.1017/S0954102018000482

Di Donato, P., Buono, A., Poli, A., Finore, I., Abbamondi, G.R., Nicolaus, B., Lama, L. (2019) Exploring marine environments for the identification of extremophiles and their enzymes for sustainable and green bioprocesses. Sustainability 11(1), 149; https://doi.org/10.3390/su11010149

Romano, I., De Angelis, A., Poli, A., Ragni, P., Lilla, L., Zito, G.,Nicolaus, B., De Luca, A.C., Di Donato, P. (2018) Resistance and Raman spectroscopy analysis of Parageobacillus thermantarcticus spores after γ-ray exposure Extremophiles doi: 10.1007/s00792-018-1049-0

Panosyan, H., Di Donato, P., Poli, A., Nicolaus, B. (2018) Production and characterization of exopolysaccharides by Geobacillus thermodenitrificans ArzA-6 and Geobacillus toebii ArzA-8 strains isolated from an Armenian geothermal spring. Extremophiles doi: 10.1007/s00792-018-1032-9

Radchenkova, N., Boyadzhieva, I., Atanasova, N., Poli, A., Finore, I., Di

Donato, P., Nicolaus, B., Panchev, I., Kuncheva, M., Kambourova, M. (2018) Extracellular polymer substance synthesized by a halophilic bacterium Chromohalobacter canadensis 28. Applied Microbiology and Biotechnology doi: 10.1007/s00253-018-8901-0

Poli, Annarita; Di Donato, Paola; Tommonaro, Giuseppina; Abbamondi, Gennaro Roberto; Finore, Ilaria; Nicolaus, Barbara (2018) Exopolysaccharide-Producing Microorganisms from Extreme Areas: Chemistry and Application. In: Extremophiles in Eurasian Ecosystems: Ecology, Diversity, and Applications; Ed.: D. Egamberdieva, N. Birkeland, H. Panosyan, W. Li. Springer 978-981-13-0329-6. DOI: 10.1007/978-981-13-0329-6_15

Caruso, C., Rizzo, C., Mangano, S., Poli, A., Di Donato, P., Finore, I., Nicolaus, B., Di Marco, G., Michaud, L., Lo Giudice, A (2018) Production and biotechnological potential of extracellular polymeric substances from sponge-associated Antarctic bacteria Applied and Environmental Microbiology doi: 10.1128/AEM.01624-17

Caruso, C., Rizzo, C., Mangano, S., Poli, A., Di Donato, P., Nicolaus, B., Di Marco, G., Michaud, L., Lo Giudice, A (2018) Extracellular polymeric substances with metal adsorption capacity produced by Pseudoalteromonas sp. MER144 from Antarctic seawater. Environmental Science and Pollution Research doi: 10.1007/s11356-017-0851-z

Marino-Merlo, F., Papaianni, E., Maugeri, T.L., Zammuto, V., Spanò, A., Nicolaus, B., Poli, A., Di Donato, P., Mosca, C., Mastino, A., Gugliandolo (2017) Anti-herpes simplex virus 1 and immunomodulatory activities of a poly-γ- glutamic acid from Bacillus horneckiae strain APA of shallow vent origin, Applied Microbiology and Biotechnology. doi: 10.1007/s00253-017-8472-5

Di Donato, P., Romano, I., Mastascusa, V., Poli, A., Orlando, P., Pugliese, M., Nicolaus, B. Survival and Adaptation of the Thermophilic Species Geobacillus thermantarcticus in Simulated Spatial Conditions (2018) Origins of Life and Evolution of Biospheres, 10.1007/s11084-017-9540-7

Di Donato, P., Taurisano, V., Tommonaro, G., Pasquale, V., Jiménez, J.M.S., de Pascual-Teresa, S., Poli, A., Nicolaus, B. (2018) Biological Properties of Polyphenols Extracts from Agro Industry's Wastes.Waste and Biomass Valorization 10.1007/s12649-017-9939-4.

Nicolaus B, Poli A, Di Donato P, Romano I, Laezza G, Gioiello A, Ulgiati S, Fratianni F, Nazzaro F, Orlando P, Dumontet S. (2016) Pb^{2+} Effects on Growth, Lipids, and Protein and DNA Profiles of the Thermophilic Bacterium *Thermus Thermophilus*. Microorganisms, 4, 45; doi:10.3390/microorganisms4040045

Finore I, Orlando P, Di Donato P, Leone L, Nicolaus B, Poli A (2016) Nesterenkonia aurantiaca sp nov., an alkaliphilic actinobacterium isolated from Antarctica. International Journal of systematic and evolutionary microbiology. doi: 10.1099/ijsem.0.000917

Finore I, Poli A, Di Donato P, Lama L, Trincone A, Fagnano M, Mori M, Nicolaus B, Tramice A, The hemicellulose extract from Cynara cardunculus: a source of value-added biomolecules produced by xylanolytic thermozymes Green Chemistry (2016) DOI: 10.1039/C5GC02774H

Poli A, Gugliandolo C, Spanò A, Taurisano V, Di Donato P, Maugeri T, Nicolaus B, Arena A. Poly-gamma-Glutamic Acid from Bacillus Horneckiae Strain APA of Shallow Marine Vent Origin with Antiviral and Immunomodulatory Effects against Herpes Simplex Virus Type-2. JOURNAL OF MARINE SCIENCE: RESEARCH & DEVELOPMENT, (2015) vol. 4 (55) DOI: 10.4172/2155-9910.1000173

Mastascusa V, Romano I, Di Donato P, Poli A, Della Corte V, Rotundi A, Bussoletti E, Quarto M, Pugliese M, Nicolaus B. Extremophiles Survival to Simulated Space Conditions: An Astrobiology Model Study. Origins of Life and Evolution of Biospheres, (2014) ISSN: 0169-6149, DOI 10.1007/s11084-014-9397-y

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Lama L, Tramice A, Finore I, Anzelmo G, Calandrelli V, Pagnotta E, Tommonaro G, Poli A, Di Donato P, Nicolaus B, Fagnano M, Mori M, Impagliazzo A, Trincone A. Degradative actions of microbial xylanolytic activities on hemicelluloses from rhizome of Arundo donax. AMB Express (2014) vol. 4: 55, ISSN: 2191-0855, doi:10.1186/s13568-014-0055-6

Finore I, Di Donato P, Poli, Kirdar B, Kasavi C, Toksoy Oner E, Nicolaus B, Lama L . Use of Agro Waste Biomass for α-Amylase Production by Anoxybacillus amylolyticus: Purification and Properties. JOURNAL MICROBIAL & BIOCHEMICAL TECHNOLOGY, (2014) vol. 6, p. 320-326, ISSN: 1948-5948. doi:10.4172/1948-5948.1000162

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Biomass and Biopolymer Production using Vegetable Wastes as Cheap Substrates for Extremophiles. CHEMICAL ENGINEERING TRANSACTIONS, (2014) vol. 38, p. 163-168, ISBN 978-88-95608-29-7; ISSN 2283-9216, DOI: 10.3303/CET1438028.

Finore I, Di Donato P, Mastascusa V, Nicolaus B, Poli A. Fermentation technologies for the optimization of marine microbial exopolysaccharide production.MARINE DRUGS (2014), vol. 12, p. 3005-3024, ISSN: 1660-3397, doi: 10.3390/md12053005

Taurisano V, Anzelmo G, Poli A, Nicolaus B, Di Donato P. Re-use of Agro-industrial Waste: Recovery of Valuable Compounds by Eco-friendly Techniques INTERNATIONAL JOURNAL OF PERFORMABILITY ENGINEERING, (2014) vol. 10, p.419-425, ISSN: 0973-1318

Anzelmo G, Fiorentino G, Tommonaro G, Poli A, Nicolaus B, Di Donato P Fibre e antiossidanti da scarti dell'industria di trasformazione dei vegetali. BIOLOGI ITALIANI, (2011) vol. 1, p. 46-52, ISSN: 0392-2510

Di Donato P, Fiorentino G, Anzelmo G, Tommonaro G, Nicolaus B, Poli A Re-Use of Vegetable Wastes as Cheap Substrates for Extremophile Biomass Production. WASTE AND BIOMASS VALORIZATION, (2011) ISSN: 1877-2641, doi:10.1007/s12649-011-9062-x

Poli A, Di Donato P, Abbamondi GR, Nicolaus B Synthesis, Production, and Biotechnological Applications of Exopolysaccharides and Polyhydroxyalkanoates by Archaea. ARCHAEA, (2011) vol. 2011, Article ID 693253, 13 pages, ISSN: 1472-3654, doi: 10.1155/2011/693253

Finore, I; Lama, L; Poli, A; Di Donato, P; Nicolaus, B (2016). Technical Developments for Vegetable Waste Biomass Degradation by Thermophiles In: Biotechnology of Extremophiles: Advances and Challenges. Ed. P.H.Rampelotto, ISBN: 978-3-319-13520-5; DOI: 10.1007/978-3-319-13521-2_19

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Biomolecules In: Microbial Factories, ISBN: 978-81-322-2594-2, 978-81-322-2595-9; DOI: 10.1007/978-81-322-2595-9_13

Tommonaro G, Poli A, Di Donato P, Abbamondi GR, Finore I, Nicolaus B (2015). Bioactive polysaccharides of vegetable and microbial origins: an overview.
In: Handbook of Polymers for Pharmaceutical Technologies, Volume 3, Biodegradable Polymers, ed. Vijay Kumar Thakur, Manju K. Thakur ISBN: 978-1-119-04142-9, pag. 1-32; Doi 10.1002/9781119041450.ch1

Di Donato P, Poli A, Taurisano V, Nicolaus B (2014). Polysaccharides: Applications in Biology and Biotechnology/ Polysaccharides from Bioagro-Waste New Biomolecules-Life. In: Polysaccharides, p. 1-29, ISBN 978-3-319-03751-6 Springer International Publishing Switzerland DOI 10.1007/978-3-319-03751-6_16-1

Poli A, Anzelmo G, Fiorentino G, Nicolaus B, Tommonaro G, Di Donato P (2011). Polysaccharides from wastes of vegetable industrial processing: new opportunities for their eco-friendly re-use. In: Magdy Elnashar ,Biotechnology of Biopolymers. p. 33-56, Rijeka:InTech - Open Access Publisher, ISBN:978-953-307-179-4

Invited or Selected Oral Presentations at conferences and workshops

Selected Oral Presentation dal titolo "The waste- based biorefinery for the sustainable production of energy and value added molecules" per il congresso della Società Chimica Italiana "Chemistry meets Industry & Society (CIS2019)", 28-30 agosto 2019, Salerno.

Selected Oral Presentation "The resistance of the thermophilic species Parageobacillus thermantarcticus in space simulated conditions" at the 6th Workshop of the Italian Astrobiology Society, Napoli 29-31 October 2018

Selected Oral Presentation "The Resistance of the Thermophilic Species Parageobacillus thermantarcticus in space simulated conditions" at the “12th International Congress on Extremophiles” (Extremophiles2018), 16-20 September 2018, Ischia, Napoli

Selected Oral Presentation "Extremophiles' relevance for the production of second generation bioethanol" at the "Biennial International Workshop Advances in Energy Studies 2017 - BIWAES 2017", Napoli

Invited Speaker, "Le biomasse vegetali di scarto prodotte dal settore agro industriale: una opportunità per lo sviluppo sostenibile", at the workshop "Innovation Village 2017", 7 april 2017, Mostra D'Oltremare, Napoli.

Invited Speaker, "Extremophiles in Astrobiology", at the "International Scientific Conference: 70 years The Stephan Angeloff Institute of Microbiology", Bulgarian Academy of Sciences”, Sofia, Bulgaria, 14-15.03.2017

Selected Oral Presentation "Biomass and Biopolymer Production using Vegetable Wastes as Cheap Substrates for Extremophiles" at the "4th INTERNATIONAL CONFERENCE ON INDUSTRIAL BIOTECHNOLOGY" 8 – 11 June 2014, Roma, Italy.

Invited Speaker, "La bioraffineria come strategia di valorizzazione degli scarti agro-industriali", at the “Giornata Scientifica "RICERCA APPLICATA IN CAMPO AGROALIMENTARE TRA RICICLO E SOSTENIBILITÁ", 7/10/13, Procida, Napoli.

Invited Speaker, "Strategie di valorizzazione degli scarti agro-industriali: recupero di biomolecole e produzione di biocarburanti", at the Workshop "Puglia Rinnovabile e Sostenibile", 6/7/12 Bari, Italy.

Selected Oral Presentation "Le amilasi batteriche - Una risorsa in campo Biotecnologico dal settore alimentare alla produzione di bioetanolo" XXII Congresso Internazionale dell'Ordine Nazionale dei Biologi 14-18 October 2009, Cervia (RA)

Napoli 8/7/2023