

# Gabriele Guidolotti

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About me: Gabriele Guidolotti is researcher at Institute on Terrestrial Ecosystems (IRET), National Research Council (CNR) (Dec 2016-to date). Received (110 cum laude) his BSc degree in Forestry in 2005 with a thesis about world biomes primary production, and his MSs degree in Forestry in 2008 with a thesis about environmental controls on CO2 losses in a Mediterranean beech forest. He obtained his PhD degree on 2012, with a thesis on the effects of climatic manipulation on functionality of a Mediterranean shrubland ecosystem. The main scientific area of interests is plant ecology and ecophysiology, with particular emphasis on the study of the impact of abiotic stressors on carbon pools and fluxes, greenhouse gases (GHG), volatile organic compounds (BVOCs) and other pollutants in the soil-plant-atmosphere continuum. He carried out his studies in several type of ecosystems ranging from forests, shrubland and grassland. His research activities are carried out "in-situ" in long-term infrastructures and "ex-situ" in common gardens and laboratories, mainly by means of gas-exchange measurements at different scales (leaf, soil, plant and ecosystem), but including also the use of models and database creation and analysis. He actively participated to several European Research Projects, mainly focused on the impact of environmental stresses and climatic changes on different plant and ecosystem processes (CARBO EUROPE IP, EUROFACE, GHG EUROPE, INCREASE, ). Within the European infrastructure INCREASE, he was responsible of the task of the collection and analysis of CO2 fluxes for the site MEDIT-IT as well as of the development of a new flux measurement system. He also was involved in other international research projects as VOCBAS, CNR-AVCR, CNR-CSIC. In that context, his scientific contribution was on the study of plant BVOCs emission and the effect of abiotic stressors. He is actually responsible of the task 4.3 of the H2020 project ProGReg. In the context of Italian national project as I-AMICA and NEUFOR, his activities were mainly focused to the application of the micro-meteorological eddy-covariance technique in an urban forest station in Naples. For the station, he is the contact person for the international research networks as FLUXNET e ICOS. He actively participates to several Italian research project OT4CLIMA, CLIMA, SWARMNET, PALMO, PON\_ICOS MED, among others. Until now, he published up to 30 papers in international peer-reviewed journals and up to 40 contribution in conference proceedings, posters, report, technical reports, and oral communications in several national and international congresses, seminars and symposiums.

## • WORK EXPERIENCE

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30/07/2020 – CURRENT – Porano, Italy  
RESEARCHER – RESEARCH INSTITUTE ON TERRESTRIAL ECOSYSTEMS OF NATIONAL RESEARCH COUNCIL

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30/12/2016 – 29/07/2020 – Monterotondo, Italy  
RESEARCHER – RESEARCH INSTITUTE ON TERRESTRIAL ECOSYSTEMS OF NATIONAL RESEARCH COUNCIL

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06/01/2016 – 30/12/2016 – Porano, Italy  
RESEARCHER (TEMPORARY) – INSTITUTE OF AGRO-ENVIRONMENTAL AND FOREST BIOLOGY OF NATIONAL RESEARCH COUNCIL

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01/06/2013 – 31/12/2015 – Porano, Italy  
POST-DOC – INSTITUTE OF AGRO-ENVIRONMENTAL AND FOREST BIOLOGY OF NATIONAL RESEARCH COUNCIL

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01/06/2012 – 30/05/2013 – Viterbo, Italy  
POST-DOC – UNIVERSITY OF TUSCIA

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15/07/2008 – 14/02/2009 – Monterotondo, Italy

● **EDUCATION AND TRAINING**

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02/01/2009 – 13/04/2012 – Viterbo, Italy  
**PHD IN FOREST ECOLOGY** – University of Tuscia

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Final grade: highly positive  
Thesis title: "*Impact of increased temperature and drought on carbon fluxes in a Mediterranean shrubland*"  
EQF level 8

01/09/2005 – 23/06/2008 – Viterbo, Italy  
**MASTER'S DEGREE IN FORESTRY** – University of Tuscia

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Final grade: 110/110 cum laude  
Thesis title: "*Effect of environmental variables and stand structure on ecosystem respiration components in a Mediterranean beech forest*"  
Supervisors: Prof. Paolo De Angelis, Prof. Giorgio Matteucci  
EQF level 7

04/11/2000 – 20/06/2005 – Viterbo, Italy  
**BACHELOR'S DEGREE IN FORESTRY** – University of Tuscia

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Final grade: 110/110 cum laude  
Thesis title: "*Analysis of forest primary production and its components across a range of different biomes*"  
Supervisors: Prof. Riccardo Valentini, Prof. Ivan Janssens  
EQF level 6

● **LANGUAGE SKILLS**

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Mother tongue(s): ITALIAN

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	B2	C2	B2	B2	B2
<b>SPANISH</b>	B2	B2	B1	B2	B1

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

● **ORGANISATIONAL SKILLS**

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Organisational skills

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Good organizational skills gained through the participation to several European projects

● **COMMUNICATION AND INTERPERSONAL SKILLS**

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Communication and interpersonal skills

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Good communication skills gained through the participation to the Erasmus project and to numerous national and international workshops and congresses

## ● **JOB-RELATED SKILLS**

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### Job-related skills

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Competences in Gas Exchange Measurements (CO<sub>2</sub>, H<sub>2</sub>O, O<sub>3</sub>, NO<sub>x</sub>, CH<sub>4</sub>, BVOCs) in soils, plants and ecosystems  
Competences in planning experimental design  
Competences in data analysis

## ● **OTHER SKILLS**

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### Other skills

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Kayak

## ● **PEER-REVIEWED PUBLICATIONS**

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### Last Papers

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- Pallozzi, E., Guidolotti, G., Mattioni, M., & Calfapietra, C. (2020). Particulate matter concentrations and fluxes within an urban park in Naples. *Environmental Pollution*, 266, 115134.
- DAndrea, E., Guidolotti, G., Scartazza, A., De Angelis, P., & Matteucci, G. (2020). Small-scale forest structure influences spatial variability of belowground carbon fluxes in a mature mediterranean beech forest. *Forests*, 11(3), 255
- Collalti, A., Tjoelker, M. G., Hoch, G., Mäkelä, A., Guidolotti, G., Hessel, M., ... & Prentice, I. C. (2020). Plant respiration: controlled by photosynthesis or biomass?. *Global change biology*, 26(3), 1739-1753.
- Gavrichkova, O., Scartazza, A., Guidolotti, G., Kuzyakov, Y., Leonardi, L., Mattioni, M., ... & Calfapietra, C. (2019). When the Mediterranean becomes harsh: Heat pulses strongly affect C allocation in plant-soil-atmosphere continuum in *Eucalyptus camaldulensis*. *Environmental and Experimental Botany*, 162, 181-191.
- Guidolotti, G., Pallozzi, E., Gavrichkova, O., Scartazza, A., Mattioni, M., Loreto, F., & Calfapietra, C. (2019). Emission of constitutive isoprene, induced monoterpenes, and other volatiles under high temperatures in *Eucalyptus camaldulensis*: A <sup>13</sup>C labelling study. *Plant, cell & environment*, 42(6), 1929-1938.

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

Name	<b>ANNA CALARCO</b>
Address	<b>RESEARCH INSTITUTE OF TERRESTRIAL ECOSYSTEMS - CNR VIA P. CASTELLINO 111, NAPOLI - 80131</b>
SCOPUS links	<a href="https://www.scopus.com/authid/detail.uri?authorId=6601977672">https://www.scopus.com/authid/detail.uri?authorId=6601977672</a>
Other link	<a href="https://www.cnr.it/people/anna.calarco">https://www.cnr.it/people/anna.calarco</a>
E-mail	<b>anna.calarco@cnr.it</b>
Nationality	Italian

WORK EXPERIENCE

- Dates (from - to) December 2018 - today
  - Name and address of the employer Research Institute on Terrestrial Ecosystems (IRET) – CNR
  - Type of business or sector
  - Occupation or position held **Researcher**
  - Main activities and responsibilities
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- Dates (from - to) March 2012 – December 2018
  - Name and address of the employer Research Institute on Terrestrial Ecosystems (IRET) – CNR
  - Type of business or sector
  - Occupation or position held **Researcher with fixed-term contract**
  - Main activities and responsibilities

EDUCATION AND TRAINING

- Dates (from - to) 2004-2012
  - Name and type of organisation providing education and training Institute of Protein Biochemistry – IBP, CNR
  - Principal subjects/occupational skills covered
  - Title of qualification awarded **Post Doc – Research fellow**
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- Dates (from - to) 2001 – 2003
  - Name and type of organisation providing education and training University "Luigi Vanvitelli" - Naples
  - Principal subjects/occupational skills covered Synthesis of new osteoinductive and osteoconductive polymers
  - Title of qualification awarded **Doctorate in Biomedical technologies applied to odontostomatological sciences**
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- Dates (from - to) 1999 - 2001
  - Name and type of organisation providing education and training Institute of Protein Biochemistry CNR - Naples
  - Principal subjects/occupational skills covered Synthesis of galactosylated hydrogels using beta-galactosidases from Sulfolobus Solfataricus
  - Title of qualification awarded **Research fellow**

- Dates (from - to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded

1992 - 1997

University of Messina - Messina

Experimental degree thesis aimed at studying the synthesis of ACE-inhibitors

**Degree in Pharmaceutical Chemistry and Technology**

## PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

ENGLISH

SCIENTIFIC SKILLS AND COMPETENCES

*Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.*

- Research interests (5 Key words): Nanotoxicology, exosome, nanomedicine, bioactive molecules, In vitro and in vivo biocompatibility studies.
- Design through KETs of delivery systems for bioactive molecules from industrial wastes following the concept of the circular economy.
- Synthesis of drug delivery systems for tissue engineering and regenerative medicine
- Study of exposome and the analysis of plant-derived exosomes to decipher the responses to abiotic stresses.
- Impact of nanomaterials on health and the environment.
- Author of 45 publication on Scientific Journals.
- Organization and Communication at national and international congresses (more than 10 communications).

RELEVANT ROLES AND COMPETENCES

*Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.*

- Coordinator of 6 research project as principal investigator or working package leader. The most important ones in the last 5 years:
  - o 2018-2020: Tecnologie abilitanti per la sintesi eco-sostenibile di nuovi materiali per la restaurativa dentale - ABILTEC. Funding body: POR FESR Campania 2014/2020. Role: Scientific coordinator;
  - o 2018-2021 Sviluppo di nanotecnologie Orientate alla Rigenerazione e Ricostruzione tissutale, Implantologia e Sensoristica in Odontoiatria/oculistica - SORRISO Funding body: PON 03 PE\_00110\_1/ptd1\_000410. Role: Working package leader;
- Tutor of 4 students.
- Referee for the international journals with IF

PUBLICATION INDEXES (SCOPUS)

- NUMBER OF PUBLICATIONS: 48
- TOTAL NUMBER OF CITATIONS: 836
- H-INDEX: 17

10 MOST RELEVANT  
PUBLICATIONS  
In the last 10 years.

1. Spagnuolo G, Pires PM, Calarco A, Peluso G, Banerjee A, Rengo S, Elias Boneta AR, Sauro S. An in-vitro study investigating the effect of air-abrasion bioactive glasses on dental adhesion, cytotoxicity and odontogenic gene expression. *Dent Mater.* 2021 Sep 21;S0109-5641(21)00248-7. doi: 10.1016/j.dental.2021.09.004.
2. Di Salle A, Viscusi G, Di Cristo F, Valentino A, Gorrasi G, Lamberti E, Vittoria V, Calarco A, Peluso G. Antimicrobial and Antibiofilm Activity of Curcumin-Loaded Electrospun Nanofibers for the Prevention of the Biofilm-Associated Infections. *Molecules.* 2021 Aug 11;26(16):4866. doi: 10.3390/molecules26164866.
3. Bonadies I, Di Cristo F, Valentino A, Peluso G, Calarco A, Di Salle A. pH-Responsive Resveratrol-Loaded Electrospun Membranes for the Prevention of Implant-Associated Infections. *Nanomaterials (Basel).* 2020 Jun 16;10(6):1175. doi: 10.3390/nano10061175.
4. Conte R, Valentino A, Di Cristo F, Peluso G, Cerruti P, Di Salle A, Calarco A. Cationic Polymer Nanoparticles-Mediated Delivery of miR-124 Impairs Tumorigenicity of Prostate Cancer Cells. *Int J Mol Sci.* 2020 Jan 29;21(3):869. doi: 10.3390/ijms21030869
5. Di Salle, A.; Tammaro, L.; Calarco, A.; De Luca, I.; Riccitiello, F.; Peluso, G.; Vittoria, V.; Sorrentino, A. Multifunctional Bioactive Resin for Dental Restorative Materials. *Polymers* 2020, 12, 332. <https://doi.org/10.3390/polym12020332>
6. Conte R, Di Salle A, Riccitiello F, Petillo O, Peluso G, Calarco A. Biodegradable polymers in dental tissue engineering and regeneration. *AIMS Materials Science.* 2018, accepted October 2018
7. Riccitiello F., De Luise A., Conte R., D'Aniello S., Vittoria V., Di Salle A., Calarco A., Peluso G., Effect of resveratrol release kinetic from electrospun nanofibers on osteoblast and osteoclast differentiation, *European Polymer Journal*, (2018), 99: 289-297, Doi: 10.1016/j.eurpolymj.2017.12.035.
8. Di Salle A, De Luca I, Alessio N, Margarucci S, Simeone M, Galderisi U, Calarco A, Peluso G. Positively charged polymers modulate the fate of human mesenchymal stromal cells via ephrinB2/EphB4 signaling. *Stem Cell Research*, 2016. Doi: 10.1016/j.scr.2016.07.005.
9. Conte R, Calarco A, Napoletano A, Valentino A, Margarucci S, Di Cristo F, Di Salle A, Peluso G. Polyphenols Nanoencapsulation for Therapeutic Applications. *J Biomol Res Ther.* 5:139.
10. Conte R, De Luca I, De Luise A, Petillo O, Calarco A, Peluso G. New Therapeutic Potentials Of Nanosized Phytomedicine. *Journal of Nanoscience and Nanotechnology*, 16, 2016..

PATENTS

- 3 National Patents: mi2009a001643 of 25.09.2009.; no. 0001417402 of 24.04.2013; no. 102015000023426.

**According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV**

Naples, June 27 2022

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

Name **ANNA DI SALLE**  
Address **RESEARCH INSTITUTE OF TERRESTRIAL ECOSYSTEMS (IRET) - CNR  
VIA P. CASTELLINO, 111 - 80131 NAPLES**  
Telephone \_\_\_\_\_ Mobile \_\_\_\_\_  
SCOPUS links <https://www.scopus.com/authid/detail.uri?authorId=6506679828>  
Other link <https://www.cnr.it/people/anna.disalle>;  
<https://orcid.org/0000-0001-6763-3636>  
E-mail **anna.disalle@cnr.it**  
Nationality Italian  
Date of Birth \_\_\_\_\_  
Gender \_\_\_\_\_

WORK EXPERIENCE

- Dates (from - to) July 2019 - today
- Name and address of the employer Research Institute of Terrestrial Ecosystems (IRET) – CNR via P. Castellino, 111 - 80131 Naples
- Type of business or sector
- Occupation or position held **Researcher**
- Main activities and responsibilities
  
- Dates (from - to) April 2012 – June 2019
- Name and address of the employer Research Institute of Terrestrial Ecosystems (IRET) – CNR via P. Castellino, 111 - 80131 Naples
- Type of business or sector
- Occupation or position held **Technologist with fixed-term contract**
- Main activities and responsibilities
  
- Dates (from - to) November 2006 – March 2012
- Name and address of the employer CPC Biotech s.r.l. – Via L. Galvani, 1 – 20875 Burago di Molgora (Monza Brianza) Italia.
- Type of business or sector
- Occupation or position held **Researcher**
- Main activities and responsibilities

EDUCATION AND TRAINING

- Dates (from - to) 2004-2005
- Name and type of organisation providing education and training Institute of Protein Biochemistry – CNR via P. Castellino, 111 - 80131 Naples
- Principal subjects/occupational skills covered
- Title of qualification awarded **Post Doc fellowship**
  
- Dates (from - to) 2000 – 2004

- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded

Università degli Studi di Napoli Federico II

Study of Sulphite Oxidase in *Thermus flavus* and *Deinococcus radiodurans*. Gene cloning and expression in *E. coli*

**Doctorate in Biochemistry and Molecular Biology**

- Dates (from - to)

1993 - 1999

- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded

Università degli Studi di Napoli Federico II

Experimental degree thesis aimed at studying the genes and proteins associated with the presence of phytopathogens in plant species

**Graduate in Chemistry**

## PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE  
OTHER LANGUAGES

ITALIAN  
ENGLISH

### SCIENTIFIC SKILLS AND COMPETENCES

*Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.*

- Research interests (Key words): natural bioactive compounds isolation and characterization, agri-food waste valorisation, abiotic stresses influence on human health, key enabling technologies and human health.
- Isolation of bioactive molecules with high-added value for the agri-food supply chain waste valorisation in a circular economy perspective.
- Optimization of HPLC, LC-MS and GC-MS methods for the evaluation of bioactive molecules concentration and pharmacokinetics.
- Evaluation of the effectiveness of new drug-delivery systems for the controlled release of bioactive molecules.
- Validation of bioactive molecules capable of interfering with gene expression in appropriate *in vitro* and *ex vivo* models and of preventing the onset and / or development of metabolic and tumour diseases also related to the pollution.
- Enzymatic catalysis as an eco-sustainable and environmentally friendly synthetic method.
- Microbial models for the analysis of biofilm formation, microbiological analyses on polymeric materials and dental materials, validation on the anti-biofilm effect of natural molecules and their derivatives, study of the role of signal molecules capable of eliciting an anti- biofilm effect.
- Organization and Communication at national and international congresses.

### RELEVANT ROLES AND COMPETENCES

*Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.*

- Coordinator of 6 research project as working package leader. The most important ones in the last 5 years:
  - 2018-2021 Sviluppo di nanotecnologie Orientate alla Rigenerazione e Ricostruzione tissutale, Implantologia e Sensoristica in Odontoiatria/oculistica - SORRISO Funding body: PON 03 PE\_00110\_1/ptd1\_000410. Role: Working package leader;
  - 2015-2018 MAREA-Materiali Avanzati Per la Ricerca ed il Comparto Agroalimentare. Funding body: PON\_03\_PE\_00106\_1. Role: Working package leader;
- Tutor of PhD and graduate students.
- Referee for the international journals with IF.

### PUBLICATION INDEXES (WoS)

- NUMBER OF PUBLICATIONS: 27
- TOTAL NUMBER OF CITATIONS: 468
- H-INDEX: 12



10 MOST RELEVANT  
PUBLICATIONS  
In the last 10 years.

1. Di Cristo F, Valentino A, De Luca I, Peluso G, Bonadies I, Calarco A, Di Salle A. PLA Nanofibers for Microenvironmental-Responsive Quercetin Release in Local Periodontal Treatment. *Molecules*. 2022 Mar 28;27(7):2205. doi: 10.3390/molecules27072205.
2. De Luca I, Di Cristo F, Valentino A, Peluso G, Di Salle A, Calarco A. Food-Derived Bioactive Molecules from Mediterranean Diet: Nanotechnological Approaches and Waste Valorization as Strategies to Improve Human Wellness. *Polymers (Basel)*. 2022 Apr 23;14(9):1726. doi: 10.3390/polym14091726.
3. Di Salle A, Viscusi G, Di Cristo F, Valentino A, Gorrasi G, Lamberti E, Vittoria V, Calarco A, Peluso G. Antimicrobial and Antibiofilm Activity of Curcumin-Loaded Electrospun Nanofibers for the Prevention of the Biofilm-Associated Infections. *Molecules*. 2021 Aug 11;26(16):4866. doi: 10.3390/molecules26164866.
4. De Luca, I.; Pedram, P.; Moeini, A.; Cerruti, P.; Peluso, G.; Di Salle, A.; Germann, N. Nanotechnology Development for Formulating Essential Oils in Wound Dressing Materials to Promote the Wound-Healing Process: A Review. *Appl. Sci.* 2021, 11, 1713. <https://doi.org/10.3390/app11041713>
5. Bonadies I, Di Cristo F, Valentino A, Peluso G, Calarco A, Di Salle A. pH-Responsive Resveratrol-Loaded Electrospun Membranes for the Prevention of Implant-Associated Infections. *Nanomaterials (Basel)*. 2020 Jun 16;10(6):1175. doi: 10.3390/nano10061175.
6. Conte R, Valentino A, Di Cristo F, Peluso G, Cerruti P, Di Salle A, Calarco A. Cationic Polymer Nanoparticles-Mediated Delivery of miR-124 Impairs Tumorigenicity of Prostate Cancer Cells. *Int J Mol Sci*. 2020 Jan 29;21(3):869. doi: 10.3390/ijms21030869
7. Di Salle, A.; Tammaro, L.; Calarco, A.; De Luca, I.; Riccitiello, F.; Peluso, G.; Vittoria, V.; Sorrentino, A. Multifunctional Bioactive Resin for Dental Restorative Materials. *Polymers* 2020, 12, 332. <https://doi.org/10.3390/polym12020332>
8. Di Salle A, Spagnuolo G, Conte R, Procino A, Peluso G, Rengo C. Effects of various prophylactic procedures on titanium surfaces and biofilm formation. *J Periodontal Implant Sci*. 2018 Dec 27;48(6):373-382. doi: 10.5051/jpis.2018.48.6.373.
9. Conte R, Di Salle A, Riccitiello F, Petillo O, Peluso G, Calarco A. Biodegradable polymers in dental tissue engineering and regeneration. *AIMS Materials Science*. 2018, accepted October 2018
10. Finicelli M, Squillaro T, Di Cristo F, Di Salle A, Melone MAB, Galderisi U, Peluso G. Metabolic syndrome, Mediterranean diet, and polyphenols: Evidence and perspectives. *J Cell Physiol*. 2019 May;234(5):5807-5826. doi: 10.1002/jcp.27506.
11. Riccitiello F., De Luise A., Conte R., D'Aniello S., Vittoria V., Di Salle A., Calarco A., Peluso G., Effect of resveratrol release kinetic from electrospun nanofibers on osteoblast and osteoclast differentiation, *European Polymer Journal*, (2018), 99: 289-297, Doi: 10.1016/j.eurpolymj.2017.12.035.
12. Esposito T.; Schettino C.; Poverino P.; Allocca S.; Adelfi L.; D'Amico A.; Capaldo G.; Varriale B.; Di Salle A.; Peluso G.; Sorrentino G.; Lus G.; Sampaolo S.; Di Iorio G. and Melone M.A.B. Synergistic Interplay between Curcumin and Polyphenol-Rich Foods in the Mediterranean Diet: Therapeutic Prospects for Neurofibromatosis 1 Patients. *Nutrients* (2017) 9(7). pii: E783. Doi: 10.3390/nu9070783.

**According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV**

Napoli, 24.06.2022