

PERSONAL INFORMATIONS Eleonora Spinozzi

OCCUPATIONAL FIELD Extraction and characterization of secondary metabolites from aromatic and medicinal plants, evaluation of their biological activity and synthesis of analogues of natural-occurring compounds.

EDUCATION AND TRAINING

- 2014** High school leaving qualification in classical studies at Liceo Classico “F. Stabili” of Ascoli Piceno.
Final grade: 100/100
Subjects studied: Greek, Latin, Italian literature, Math, Physics, Science, Biology, English and English literature.
- 12/07/2019** Master degree in “Chimica e Tecnologia Farmaceutiche” (Medicinal Chemistry) at University of Camerino
Final grade: 110/110 cum laude and encomio.
Thesis: “Fluorine in the horizons of medicinal chemistry: synthesis of biologically active fluorinated small molecules”.
- 24/07/2019** Teaching expertise improvement with the PF24 course (24 CFU credits in anthropo-psycho-pedagogical disciplines and didactic technologies (D.M. 616, 10/08/2017).
- November 2019** National Habilitation as professional pharmacist.
- June 2020** National Habilitation as professional chemist.
- 01/12/2023-01/12/2034** National Scientific Habilitation as Associate Professor (BANDO D.D. 553/2021, SETTORE CONCORSUALE 05/A1-BOTANICA, (art. 16, comma 1, Legge 240/10)).
- 06/11/ 2019 – 06/04/2023** PhD in Chemical and Pharmaceutical Sciences and Biotechnology – Pharmaceutical, nutraceutical and food sciences (XXXV cycle) in UNICAM - Chemistry Interdisciplinary Project (ChIP), School of Pharmacy, University of Camerino, Via Madonna delle Carceri, 62032, Camerino, Italy
- Synthesis of analogues of natural products;
 - Extraction of medicinal and food plants’ bioactive compounds;
 - Identification and quantification of essential oil/extracts constituents;
 - Employment analytical techniques as GC-MS, GC-FID and HPLC to determine the chemical composition of essential oils or extracts, obtained by various extractive techniques;
 - Study of the biological activity of natural products, with the focus on their insecticidal potential;
 - Encapsulation of essential oils, extracts, and pure natural compounds into

stable formulations, such as nano- and microemulsions, to be used to develop potential biopesticides.

Supervisors: Prof. Maggi Filippo (Pharmaceutical Botany), Prof. Riccardo Petrelli (Medicinal Chemistry), Prof. Alessandro Palmieri (Organic Chemistry)

- 06/04/2023** PhD degree in Chemical and Pharmaceutical Sciences and Biotechnology – Pharmaceutical, nutraceutical and food sciences (XXXV cycle) at the University of Camerino
- 01/05/2023-30/11/2023** Post Doc (Borsa di Studio e Ricerca on “Extraction, purification and synthesis of polycetylenes”) at the University of Camerino.
- 01/12/2023-up to date** Post Doc at the University of Camerino (SSD BIO/15 “Biologia farmaceutica”, Title of the Project: “Extraction and isolation of bioactive secondary metabolites from *Carlina acaulis* and *Acmella oleracea*”).

CURRICULAR TRAININGS

- 01/10/2018** Master Thesis in the Laboratory of Organic Chemistry of Prof. Enrico Marcantoni (University of Camerino, Italy).
- 07/01/2019 – 29/03/2019** Attendance at the Department of Organic Chemistry in the laboratory of Prof. Nuno Maulide (University of Vienna, Austria) to continue the work of Thesis with an Erasmus + Traineeship programme.
- 12/07/2022 – 26/10/2022** Attendance at the Department of Organic Chemistry in the laboratory of Prof. Nuno Maulide (University of Vienna, Austria) to perform the PhD research activity abroad.
- 21/09/2023 – 22/09/2023** SIF School “Paolo Ceccherelli”, METABOLOMICS IN NATURAL PRODUCT RESEARCH, From biomarker discovery to deep metabolome analysis and targeted isolation of bioactive compounds. Hotel Nettuno, Catania.
- 27/09/2024-28/09/2024** Workshop SIF - YOUNG TO YOUNG: TODAY FOR TOMORROW. Camogli (GE), Italy.

WORK EXPERIENCE

- 09/11/2020 – 01/06/2021** Assignment of ‘Tutor Didattico’ of Chemistry for the Degree Course in ‘Ambiente e gestione sostenibile delle risorse naturali’.
- 04/11/2021 – 01/06/2022** Assignment of ‘Tutor Didattico’ of Chemistry for the Degree Course in ‘Ambiente e gestione sostenibile delle risorse naturali’.
- 28/03/2022 – 30/09/2022** Assignment of ‘Tutor D’Aula’ of Chemistry.
- 16/11/2022 – 10/06/2023** Assignment of ‘Tutor Didattico’ of Chemistry for the Degree Course in ‘Ambiente e gestione sostenibile delle risorse naturali’.
- 07/11/2023 – 31/01/2024** Assignment of ‘Tutor Didattico’ of Chemistry for the Degree Course in ‘Biosciences and biotechnology’.

PERSONAL SKILLS

Mother tongue	Italian				
Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C2	C2	C1
	Certificate in English (C1-GRADE B) achieved on 18/11/2023 by Cambridge Assessment English in UNICAM.				
Communication skills	Excellent verbal and communication skills. Good collaborative skills and good listening skills.				
Organisational skills	Excellent organisational skills.				
Job-related skills	Excellent team working skills and study method.				
Technical skills	Good command of the main extractions techniques, hydro/steam distillation and microwave-assisted extraction apparatuses; good knowledge of the analytical techniques and chromatographic systems (GC-MS and GC-FID) and of HPLC, NMR, MS, IR; good knowledge of organic synthesis's reactions and chromatography.				
Digital skills	Good command of Microsoft Office programmes, Outlook, Internet Explorer, Chemdraw, MestreNova and Topspin, of MSD ChemStation software by Agilent for GC-MS chromatograms analysis; good knowledge of the main sources for bibliographic research, such as Google Scholar, Scopus, Reaxys and PubMed.				
Driving licence	B				

OTHER INFORMATIONS

Publications	<ol style="list-style-type: none"> 1. Spinozzi, E., Bauer, A., & Maulide, N. (2019). A Mild Synthesis of Bicyclic Alkoxyoxazolium Salts from Proline and Pipecolic Acid Derivatives. <i>European journal of organic chemistry</i>, 2019(31-32), 5230-5233. 2. Benelli, G., Pavoni, L., Zeni, V., Ricciardi, R., Cosci, F., Cacopardo, G., ... & Lucchi, A. (2020). Developing a highly stable <i>Carlina acaulis</i> essential oil nanoemulsion for managing <i>Lobesia botrana</i>. <i>Nanomaterials</i>, 10(9), 1867.
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3. Frezza, C., Venditti, A., Bianco, A., Serafini, M., Pitorri, M., Sciubba, F., ... & Petrelli, R. (2020). Phytochemical Analysis and Trypanocidal Activity of *Marrubium incanum* Desr. *Molecules*, 25(14), 3140.
4. Spinozzi, E., Maggi, F., Bonacucina, G., Pavela, R., Boukouvala, M. C., Kavallieratos, N. G., ... & Benelli, G. (2021). Apiaceae essential oils and their constituents as insecticides against mosquitoes—A review. *Industrial crops and products*, 171, 113892.
5. Benelli, G., Rizzo, R., Zeni, V., Govigli, A., Samková, A., Sinacori, M., ... & Canale, A. (2021). *Carlina acaulis* and *Trachyspermum ammi* essential oils formulated in protein baits are highly toxic and reduce aggressiveness in the medfly, *Ceratitis capitata*. *Industrial Crops and Products*, 161, 113191.
6. Pavela, R., Pavoni, L., Bonacucina, G., Cespi, M., Cappellacci, L., Petrelli, R., ... & Benelli, G. (2021). Encapsulation of *Carlina acaulis* essential oil and carlina oxide to develop long-lasting mosquito larvicides: Microemulsions versus nanoemulsions. *Journal of Pest Science*, 94(3), 899-915.
7. Spinozzi, E., Baldassarri, C., Acquaticci, L., Del Bello, F., Grifantini, M., Cappellacci, L., & Riccardo, P. (2021). Adenosine receptors as promising targets for the management of ocular diseases. *Medicinal Chemistry Research*, 30(2), 353-370.
8. Kavallieratos, N. G., Skourti, A., Nika, E. P., Mártonfi, P., Spinozzi, E., & Maggi, F. (2021). *Tanacetum vulgare* essential oil as grain protectant against adults and larvae of four major stored-product insect pests. *Journal of Stored Products Research*, 94, 101882.
9. Spinozzi, E., Pavela, R., Bonacucina, G., Perinelli, D. R., Cespi, M., Petrelli, R., ... & Maggi, F. (2021). Spilanthol-rich essential oil obtained by microwave-assisted extraction from *Acmella oleracea* (L.) RK Jansen and its nanoemulsion: Insecticidal, cytotoxic and anti-inflammatory activities. *Industrial Crops and Products*, 172, 114027.
10. Angeloni, S., Spinozzi, E., Maggi, F., Sagratini, G., Caprioli, G., Borsetta, G., ... & Ricciutelli, M. (2021). Phytochemical profile and biological activities of crude and purified *Leonurus cardiaca* extracts. *Plants*, 10(2), 195.

11. Rizzo, R., Pistillo, M., Germinara, G. S., Lo Verde, G., Sinacori, M., Maggi, F., ... & Benelli, G. (2021). Bioactivity of *Carlina acaulis* essential oil and its main component towards the olive fruit fly, *Bactrocera oleae*: Ingestion toxicity, electrophysiological and behavioral insights. *Insects*, *12*(10), 880.
12. Kavallieratos, N. G., Boukouvala, M. C., Ntalaka, C. T., Skourti, A., Nika, E. P., Maggi, F., ... & Benelli, G. (2021). Efficacy of 12 commercial essential oils as wheat protectants against stored-product beetles, and their acetylcholinesterase inhibitory activity. *Entomologia Generalis*, 385-414.
13. Rosato, A., Barbarossa, A., Mustafa, A. M., Bonacucina, G., Perinelli, D. R., Petrelli, R., ... & Spinozzi, E. (2021). Comprehensive Evaluation of the Antibacterial and Antifungal Activities of *Carlina acaulis* L. Essential Oil and Its Nanoemulsion. *Antibiotics*, *10*(12), 1451.
14. Benelli, G., Ceccarelli, C., Zeni, V., Rizzo, R., Verde, G. L., Sinacori, M., ... & Canale, A. (2022). Lethal and behavioural effects of a green insecticide against an invasive polyphagous fruit fly pest and its safety to mammals. *Chemosphere*, *287*, 132089.
15. Spinozzi, E., Ferrati, M., Baldassarri, C., Cappellacci, L., Marmugi, M., Caselli, A., ... & Petrelli, R. (2022). A Review of the Chemistry and Biological Activities of *Acmella oleracea* ("jambù", Asteraceae), with a View to the Development of Bioinsecticides and Acaricides. *Plants*, *11*(20), 2721.
16. Kavallieratos, N. G., Nika, E. P., Skourti, A., Xefteri, D. N., Cianfaglione, K., Perinelli, D. R., ... & Maggi, F. (2022). Piperitenone oxide-rich *Mentha longifolia* essential oil and its nanoemulsion to manage different developmental stages of insect and mite pests attacking stored wheat. *Industrial Crops and Products*, *178*, 114600.
17. Giordani, C., Spinozzi, E., Baldassarri, C., Ferrati, M., Cappellacci, L., Santibañez Nieto, D., ... & Maggi, F. (2022). Insecticidal Activity of Four Essential Oils Extracted from Chilean Patagonian Plants as Potential Organic Pesticides. *Plants*, *11*(15), 2012.
18. Kavallieratos, N. G., Nika, E. P., Skourti, A., Perinelli, D. R., Spinozzi, E., Bonacucina, G., ... & Maggi, F. (2022). Apiaceae essential oil nanoemulsions as effective wheat protectants against five arthropod pests. *Industrial Crops*

- and Products*, 186, 115001.
19. Kavallieratos, N. G., Nika, E. P., Skourti, A., Spinozzi, E., Ferrati, M., Petrelli, R., ... & Benelli, G. (2022). *Carlina acaulis* essential oil: a candidate product for agrochemical industry due to its pesticidal capacity. *Industrial Crops and Products*, 188, 115572.
 20. Perinelli, D. R., Pavela, R., Bonacucina, G., Baldassarri, C., Spinozzi, E., Torresi, J., ... & Canale, A. (2022). Development, characterization, insecticidal and sublethal effects of *Bunium persicum* and *Ziziphora clinopodioides*-based essential oil nanoemulsions on *Culex quinquefasciatus*. *Industrial Crops and Products*, 186, 115249.
 21. Sánchez-Gómez, S., Pagán, R., Pavela, R., Mazzara, E., Spinozzi, E., Marinelli, O., ... & Benelli, G. (2022). Lethal and sublethal effects of essential oil-loaded zein nanocapsules on a zoonotic disease vector mosquito, and their non-target impact. *Industrial Crops and Products*, 176, 114413.
 22. Kavallieratos, N. G., Nika, E. P., Skourti, A., Boukouvala, M. C., Ntalaka, C. T., Maggi, F., ... & Bonacucina, G. (2022). *Carlina acaulis* essential oil nanoemulsion as a new grain protectant against different developmental stages of three stored-product beetles. *Pest Management Science*, 78(6), 2434-2442.
 23. Pavela, R., Ferrati, M., Spinozzi, E., Maggi, F., Petrelli, R., Rakotosaona, R., ... & Benelli, G. (2022). The Essential Oil from the Resurrection Plant *Myrothamnus moschatus* Is Effective against Arthropods of Agricultural and Medical Interest. *Pharmaceuticals*, 15(12), 1511.
 24. Spinozzi, E., Ferrati, M., Cappellacci, L., Caselli, A., Perinelli, D. R., Bonacucina, G., ... & Benelli, G. (2023). *Carlina acaulis* L.(Asteraceae): biology, phytochemistry, and application as a promising source of effective green insecticides and acaricides. *Industrial Crops and Products*, 192, 116076.
 25. Ntalli, N., Zochios, G., Nikolaou, P., Winkiel, M., Petrelli, R., Bonacucina, G., ... & Benelli, G. (2023). *Carlina acaulis* essential oil nanoemulsion for managing *Meloidogyne incognita*. *Industrial Crops and Products*, 193, 116180.
 26. Giunti, G., Campolo, O., Laudani, F., Palmeri, V., Spinozzi, E., Bonacucina, G., Maggi, F., Pavela, R., Zeni, V., Canale, A., Lucchi, A., Benelli, G. (2023).

- Essential oil-based nano-insecticides: ecological costs and commercial potential. In: Koul, O. (2023). Development and Commercialization of Biopesticides. Costs ans. IITA, Elsevier.
27. Spinozzi, E., Ferrati, M., Lo Giudice, D., Felicioni, E., Petrelli, R., Benelli, G., Maggi, F.*, Cespi, M. (2023). Microwave-assisted hydrodistillation of the insecticidal essential oil from *Carlina acaulis*: a Fractional Factorial Design Optimization study. *Plants*, 12(3), 622.
28. Kavallieratos, N. G., Bonacucina, G., Nika, E. P., Skourti, A., Georgakopoulou, S. K. C., Filintas, C. S., ... & Benelli, G. (2023). The Type of Grain Counts: Effectiveness of Three Essential Oil-Based Nanoemulsions against *Sitophilus oryzae*. *Plants*, 12(4), 813.
29. Gugliuzzo, A., Francardi, V., Simoni, S., Roversi, P. F., Ferrati, M., Spinozzi, E., ... & Rizzo, R. (2023). Role of plant essential oil nanoemulsions on host colonization by the invasive ambrosia beetle *Xylosandrus compactus*. *Industrial Crops and Products*, 195, 116437.
30. Ferrati, M., Spinozzi, E., Baldassarri, C., Maggi, F., Pavela, R., Canale, A., Petrelli, R., Cappellacci, L. (2023) Efficacy of *Mentha aquatica* L. Essential Oil (Linalool/Linalool Acetate Chemotype) against Insect Vectors and Agricultural Pests. *Pharmaceuticals*, 16(4):633.
31. Feng, M., Fernandes, A. J., Sirvent, A., Spinozzi, E., Shaaban, S., & Maulide, N. (2023). Free Amino Group Transfer via α -Amination of Native Carbonyls. *Angewandte Chemie International Edition*, e202304990.
32. Spinozzi, E., Ferrati, M., Baldassarri, C., Maggi, F., Pavela, R., Benelli, G., ... & Petrelli, R. (2023). Synthesis of Carlina Oxide Analogues and Evaluation of Their Insecticidal Efficacy and Cytotoxicity. *Journal of Natural Products*, 86(5), 1307–1316.
33. Spinozzi, E., Zeni, V., Di Giovanni, F., Marmugi, M., Baldassarri, C., Mazzara, E., ... & Benelli, G. (2023). Aniseed, *Pimpinella anisum*, as a source of new agrochemicals: phytochemistry and insights on insecticide and acaricide development. *Agriculture Communications*, (1), 100003.
34. Álvarez-Rodríguez, S., Spinozzi, E., Sánchez-Moreiras, A. M., López-

- González, D., Ferrati, M., Lucchini, G., ... & Araniti, F. (2023). Investigating the phytotoxic potential of *Carlina acaulis* essential oil against the weed *Bidens pilosa* through a physiological and metabolomic approach. *Industrial Crops and Products*, 203, 117149.
35. Boukouvala, M. C., Kavallieratos, N. G., Maggi, F., Angeloni, S., Ricciutelli, M., Spinozzi, E., ... & Benelli, G. (2023). Being exposed to *Acmella oleracea*-based insecticides extract reduces mobility and mating success in *Prostephanus truncatus*, the major pest of maize in storages. *Journal of Stored Products Research*, 104, 102151.
36. Mazzara, E., Spinozzi, E., Maggi, F., Petrelli, R., Fiorini, D., Scortichini, S., ... & Benelli, G. (2023). Hemp (*Cannabis sativa* cv. Kompolti) essential oil and its nanoemulsion: Prospects for insecticide development and impact on non-target microcrustaceans. *Industrial Crops and Products*, 203, 117161.
37. Kavallieratos, N. G., Spinozzi, E., Filintas, C. S., Nika, E. P., Skourti, A., Panariti, A. M. E., ... & Benelli, G. (2023). *Acmella oleracea* extracts as green pesticides against eight arthropods attacking stored products. *Environmental Science and Pollution Research*, 1-24.
38. Rizzo, R., Ragusa, E., Benelli, G., Lo Verde, G., Zeni, V., Maggi, F., Petrelli, R., Spinozzi, E., Ferrati, M., Sinacori, M., Tsolakis, H. (2023). Lethal and sublethal effects of the polyacetylene carlina oxide on *Tetranychus urticae* (Acari: Tetranychidae) and *Neoseiulus californicus* (Acari: Phytoseiidae). *Pest Management Science*.
39. Merino, N., Berdejo, D., Pagán, E., Girard, C., Kerros, S., Spinozzi, E., ... & García-Gonzalo, D. (2023). Phenotypic and Genotypic Comparison of Antimicrobial-Resistant Variants of *Escherichia coli* and *Salmonella* Typhimurium Isolated from Evolution Assays with Antibiotics or Commercial Products Based on Essential Oils. *Pharmaceuticals*, 16(10), 1443.
40. Ferrati, M., Maggi, F., Spinozzi, E. (2023). Rotenone: Advances on Resources, Biosynthetic Pathway, Bioavailability, Bioactivity, and Pharmacology. In: Xiao, J. (eds) Handbook of Dietary Flavonoids. Springer, Cham. https://doi.org/10.1007/978-3-030-94753-8_92-1.
41. Chabane, S., Boudjelal, A., Bouaziz-Terrachet, S., Spinozzi, E., Maggi, F.,

- Petrelli, R., & Tail, G. (2023). Analgesic effect of *Centaureum erythraea* and molecular docking investigation of the major component swertiamarin. *Natural Product Research*, 1-7.
42. Gabbianelli, R., Shahar, E., De Simone, G., Rucci, C., Bordoni, L., Feliziani, G., ... & Mahajna, J. (2023). Plant-Derived Epi-Nutraceuticals as Potential Broad-Spectrum Anti-Viral Agents. *Nutrients*, 15(22), 4719.
43. Baldassarri, C., Spinozzi, E., Ferrati, M., Rossi, P., Maggi, F., & Petrelli, R. (2023). Editorial for the Special Issue “Antiprotozoal Activity of Natural Products”. *Antibiotics*, 12(12), 1650.
44. Kavallieratos, N. G., Boukouvala, M. C., Skourti, A., Filintas, C. S., Eleftheriadou, N., Gidari, D. L. S., ... & Maggi, F. (2024). Essential oils from three Cupressaceae species as stored wheat protectants: will they kill different developmental stages of nine noxious arthropods?. *Journal of Stored Products Research*, 105, 102232.
45. Kavallieratos, N. G., Eleftheriadou, N., Boukouvala, M. C., Skourti, A., Filintas, C. S., Gidari, D. L. S., ... & Spinozzi, E. (2024). Exploring the Efficacy of Four Apiaceae Essential Oils against Nine Stored-Product Pests in Wheat Protection. *Plants*, 13(4), 533.
46. Novák, M., Pavela, R., Spinozzi, E., Ferrati, M., Petrelli, R., Maggi, F., ... & Benelli, G. (2024). Lethal and sublethal effects of carlina oxide on the aphid *Metopolophium dirhodum* and its non-target impact on two biological control agents. *Journal of Pest Science*, 1-8.
47. Ferrati, M., Spinozzi, E., Mazzara, E., Ianni, M., Abouelenein, D., Petrelli, R., ... & Cespi, M. (2024). Microwave-assisted hydrodiffusion and gravity extraction: An efficient method to produce pomegranate juice. *Food Chemistry*, 448, 139101.
48. Tortorici, S., Zeni, V., Perinelli, D. R., Ferrati, M., Spinozzi, E., Maggi, F., ... & Rizzo, R. (2024). Toxicity and repellent activity of a carlina oxide nanoemulsion toward the South American tomato pinworm, *Tuta absoluta*. *Journal of Pest Science*, 1-12.
49. Spinozzi, E., Ferrati, M., Baldassarri, C., Petrelli, R., Cappellacci, L., De Fazi, L., ... & Maggi, F. (2024). Unlocking the potential of Alexanders (*Smyrniium*

- olusatrum* L., Apiaceae): A neglected species with future crop prospect. *Industrial Crops and Products*, 218, 118847.
50. Matteucci, F., Ferrati, M., Spinozzi, E., Piergentili, A., Del Bello, F., Giorgioni, G., ... & Cappellacci, L. (2024). Synthesis, Biological, and Computational Evaluations of Conformationally Restricted NAD-Mimics as Discriminant Inhibitors of Human NMN-Adenylyltransferase Isozymes. *Pharmaceuticals*, 17(6), 739.
51. Ferrati, M., Spinozzi, E., Baldassarri, C., Rossi, P., Favia, G., Fiorini, D., ... & Petrelli, R. (2024). Green purification of *Acmella oleracea* extract by wiped-film short path molecular distillation boosts the insecticidal activity on mosquito larvae. *Industrial Crops and Products*, 218, 118818.
52. Spinozzi, E., Ferrati, M., Cappellacci, L., Petrelli, R., Baldassarri, C., Morshedloo, M. R., ... & Pavela, R. (2024). Major monoterpenoids from *Dracocephalum moldavica* essential oil act as insecticides against *Culex quinquefasciatus* with synergistic and antagonistic effects. *Industrial Crops and Products*, 219, 119060.
53. Ferrati, M., Baldassarri, C., Rossi, P., Favia, G., Benelli, G., De Fazi, L., Morshedloo, M.R., Quassinti, L., Petrelli, R., Spinozzi, E., Maggi, F. (2024). Unveiling the Larvicidal Potential of Golpar (*Heracleum persicum* Desf. ex Fisch.) Essential Oil and Its Main Constituents on *Aedes* and *Anopheles* Mosquito Vectors. *Plants*, 13, 2974.
54. Scotti, R., Spinozzi, E., Gabbianelli, R. (2024). Regulation of gene transcription in *Escherichia coli* O157:H7 in response to a natural derivate peptide of esculentin-1a used in combination with essential oils from plants of the *Cymbopogon* genus. *Annali dell'Istituto superiore di sanita*, 60(3), 191–196.
55. Tortorici, S., Bedini, S., Casadei, A., Pistillo, M.O., Lapenda, F., D'Isita, I., Petrelli, R., Bonacucina, G., Perinelli, D.R., Ferrati, M., Spinozzi, E., Canale, A., Germinara, S.G., Maggi, F., Benelli, G., Rizzo, R. (2024). Targeting *Xylella fastidiosa*: sustainable management of *Philaenus spumarius* using carlina oxide. *Industrial Crops and Products*, accepted.
56. Zeni, V., Ricciardi, R., Masoni, A., Santini, G., Di Giovanni, F., Frascioni, C.,

Lucchi, A., Canale, A., Spinozzi, E., Maggi, F., Desneux, L., Benelli, G., Giunti, G. (2024). *Pimpinella anisum* essential oil and trans-anethole activity against key insect pests and non-target ants. *Journal of Pest Science*, accepted.

Oral communications

1. National conference, oral contribution: **Spinozzi, E.**, Maggi, F., Petrelli, R., Cappellacci, L., Benelli, G., Pavela R. *Carlina acaulis*: a promising candidate for eco-friendly botanical pesticides. 115° Congresso della Società Botanica Italiana. Online, September, 9-11, 2020, p.195.
2. International conference, oral contribution: **Spinozzi, E.**, Maggi, F., Petrelli, R., Cappellacci, L., Benelli, G., Canale, A., Pavela, R. A focus on jambù: from the Brazilian folk medicine to the development of novel botanical insecticides. 116° Congresso della Società Botanica Italiana- VII International Plant Science Conference (IPSC). Online, September, 8-10, 2021, p. xix.
3. International conference, oral contribution: **Spinozzi, E.**, Maggi, F., Petrelli, R., Cappellacci, L., Palmieri, A., Benelli, G., Canale, A., Pavela, R. *Carlina acaulis*, a traditional medicinal plant in the horizon of eco-friendly botanical insecticides. ACS Fall 2021. Online, Atalanta, GA, August, 22-26, 2021.
4. International conference, oral contribution: **Spinozzi, E.**, Maggi, F., Petrelli, R., Cappellacci, L., Benelli, G., Canale, A., Pavela R. *Carlina acaulis*: from its use in food supplements to promising insecticidal applications. 5th International Symposium on Phytochemicals in Medicine and Food (5-ISPMF). Online, Nanchang, China, August 25-September 01, 2021, p.178.
5. Maggi, F., Mazzara, E., Spinozzi, E. VERDURA DIMENTICATA DA RIVALUTARE: IL CASO DEL SEDANO SELVATICO (SMYRNIUM OLUSATRUM). Rapporti ISTISAN, 2022, 22/2, 93-98.
6. National conference: Rizzo, R., Germinara, G.S., Pistillo, M., Sinacori, M., Lo Verde, G., Maggi, F., Cappellacci, L., Petrelli, R., Spinozzi, E., Canale, A., Benelli, G. *Carlina* oxide as a new active ingredient for lure and kill against *Bactrocera oleae*? Insecticidal activity and electrophysiological insights. Atti XXVI Congr. Naz. Ital. Entomologia (CNIE), Torino, June, 7-13, 2021, p.139.
7. **Spinozzi, E.** Mela rosa dei Monti Sibillini: da antica varietà a prodotto nutraceutico. Indena e UNICAM: un cammino trentennale di ricerca nella Farmaceutica e Nutraceutica - ChIP UNICAM, Camerino, Italy, July, 05, 2022.
8. **Spinozzi, E.** Mela rosa dei Monti Sibillini: da antica varietà a prodotto nutraceutico. Convegno sulla Mela Rosa - Sibillini in rosa - Montedinove,

October, 29, 2022.

9. International conference, oral contribution: **Spinozzi, E.**, Ferrati, M., Maggi, F., Petrelli, R., Caselli, A., Benelli, G., Perinelli, D.R., Bonacucina, G. The wild artichoke *Carlina acaulis* as promising source of effective insecticides and acaricides. XI International Symposium on Artichoke, Cardoon and their Wild Relatives. Online, Molfetta, Italy, April, 18-21, 2023, p.14.
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13. International conference, invited oral contribution: **Spinozzi E.**, Ferrati, M., Baldassarri, C., Perinelli, D.R., Bonacucina, G., Pavela, R., Cappellacci, L., Petrelli, R., Maggi, F. *Bunium persicum* (Boiss.) B Fedtsch. and *Ziziphora clinopodioides* Lam. essential oils and their nanoemulsions: promising candidates for the management of *Culex quinquefasciatus*. XXX Congreso Peruano de Química, XXX Congreso Italo-Latinamericano de Etnomedicina. Online, October, 16-20, 2023.
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15. National conference: Rizzo R., Germinara G.S., Pistillo M., Sinacori M., Lo

- Verde G., Maggi F. Cappellacci L., Petrelli R., Spinozzi E., Canale A., Benelli G. Ossido di carlina: un nuovo componente attivo in strategie adulticide contro *Bactrocera oleae*? Attività insetticida e saggi elettrofisiologici. Atti XVI Congresso Nazionale Italiano di Entomologia (CNIE), Torino, June, 7-13, 2021, p.139.
16. National conference: Rizzo R., Ragusa E., Benelli G., Lo Verde G., Zeni V., Maggi F., Spinozzi E., Sinacori M., Tsolakis H. L'olio essenziale di Carlina acaulis è altamente efficace nei confronti di *Tetranychus urticae* e non tossico nei confronti del suo predatore *Neoseiulus californicus*. Atti XXVII Congresso Nazionale Italiano di Entomologia (CNIE), Palermo, Italy, June, 12-16, 2023, p. 200.
17. International conference: Baiamonte M., Tsolakis H., Lo Verde G., Ragusa E., Rizzo R., Spinozzi E., Maggi F., Botta L. Development of bioformulations based on natural carriers and essential oils for agricultural applications: preliminary results. 11th Conference of the Modification, Degradation, Stabilization of Polymers – MODEST 2024. Palermo, Italy, September, 1-4, 2024, pp. 277-278
18. International conference: Tsolakis H., Giordano T., Catania R., Rizzo R., Ragusa E., Lo Verde G., Maggi F., Ferrati M., Spinozzi E., Petrelli R. Evaluation of toxicity of *Acmella oleracea* extract against *Tetranychus urticae* in laboratory tests. X Symposium EURAAC – Acarology: Impacts & Solutions for humans, agriculture & environment. Athens, Greece, September, 2-6, 2024, p. 118.
19. International conference: Rizzo R., Tortorici S., Lo Verde G., Pistillo M., D'Isita I., Spinozzi E., Ferrati M., Germinara S.G., Maggi F., Bedini S., Benelli G. Toxicity, repellent and antifeedant activity of carlina oxide nanoemulsion on *Philaenus spumarius*, the main vector of *Xylella fastidiosa*. XXVII International Congress of Entomology (ICE 2024 Kyoto). Kyoto, Japan, August, 25-30, 2024, p. 1835-1836.
20. International conference, oral contribution: **Spinozzi E.**, Ferrati M., Baldassarri C., Rossi P., Benelli G., De Fazi L., Giordani C., Petrelli R., Cappellacci L., Maggi F. *Commiphora myrrha* (T.Nees) Engl. essential oil and its furanosesquiterpenoids: a breakthrough in mosquito vector

management. 119° Congresso della Società Botanica Italiana- X INTERNATIONAL PLANT SCIENCE CONFERENCE (IPSC). Teramo, Italia, September, 11 – 2024, p. xxviii.

21. National workshop oral contribution: Spinozzi E., Ferrati M., Baldassarri C., Rossi P., Benelli G., De Fazi L., Giordani C., Petrelli R., Cappellacci L., Maggi F., Natural sources of novel insecticides: the case of *Commiphora myrrha* (T.Nees) Engl. essential oil and its furanosesquiterpenoids. Workshop SIF - YOUNG TO YOUNG: TODAY FOR TOMORROW. Camogli (GE), Italy, September, 27-28, 2024.

Poster presentations

1. **Spinozzi, E.**, Pavela, R., Bonacucina, G., Perinelli, D.R., Cespi, M., Petrelli, R., Cappellacci, L., Fiorini, D., Scortichini, S., Garzoli, S., Angeloni, C., Freschi, M., Hrelia, S., Quassinti, L., Bramucci, M., Lupidi, G., Sut, S., Dall'Acqua, S., Benelli, G., Canale, A., Drenaggi, E., Maggi, F. Spilanthol-rich essential oil obtained by microwave-assisted extraction from *Acmella oleracea* (L.) R.K. Jansen and its nanoemulsion: Insecticidal, cytotoxic and anti-inflammatory activities. Indena e UNICAM: un cammino trentennale di ricerca nella Farmaceutica e Nutraceutica (ChIP UNICAM, Camerino, Italy, July, 05, 2022).
2. **Spinozzi, E.**, Angeloni, S., Ricciutelli, M., Sensini, A., Ferrati, M., Baldassarri, C., Torresi, J., Petrelli, R., Maggi, F. *Acmella oleracea* (L.) R.K. Jansen: from the optimization of spilanthol-extraction procedure to the identification and quantification of alkylamides. Indena e UNICAM: un cammino trentennale di ricerca nella Farmaceutica e Nutraceutica (ChIP UNICAM, Camerino, Italy, July, 05, 2022).
3. Spinozzi, E., Ferrati, M., Piergentili, A., Petrelli, R., Cappellacci, L., Maggi, F., Angeloni, S., Ricciutelli, M., Drenaggi, E., Boukouvala, M.C., Kavallieratos, N.G., Benelli, G. Spilanthol-rich extracts from *Acmella oleracea* (L.) R.K. Jansen and their efficacy on stored product pests. 1° Congresso intersocietà sui prodotti vegetali per la salute: Il ruolo delle piante medicinali nella medicina moderna (Padova, Italy, June, 15-17, 2023).
4. Spinozzi E., Ferrati M., Lo Giudice D., Felicioni E., Petrelli R., Benelli G., Maggi F., Cespi M. Optimization of the microwave-assisted hydrodistillation of *Carlina acaulis* essential oil by fractional factorial design study. 1° Congresso intersocietà sui prodotti vegetali per la salute: il ruolo delle piante medicinali nella medicina moderna (Padova, Italy, June, 15-17, 2023).

- Scientific collaborations** Collaboration with the University of Pisa, University of Athens, Crop Research Institute of Prague, CREA Research Institute, Università Sapienza – Università di Roma, Università degli Studi di Bari, Università degli Studi di Padova, INDENA Spa, SIPCAM OXON Spa, Dompè farmaceutici Spa.
- Editorial activity** **Reviewer** for: *Antioxidants, Environmental Science and Pollution Research, Experimental Parasitology, Food Research International, Heliyon, Industrial Crops and Products, International Journal of Molecular Sciences, Journal of Pest Science, Journal of Natural Pesticide Research, Journal of Natural Products, Molecules, Plants, Nutrients, South African Journal of Botany.*
- Guest Editor** for *Plants*’ Special Issue “Green Insect Control: The Potential Impact of Plant Essential Oils”.
- Guest Editor** for *Horticulturae*’ Special Issue “Extraction, Utilization, and Application of Bioactive Compounds From Horticultural Plants”.
- Membership of scientific societies** Italian Society of Phytochemistry (S.I.F.)
Italian Botanical Society (S.B.I.)
- Teaching activities** - Teaching “Food Plants and Phytonutrients” for the “Food Science and Engineering” Course at Zhengzhou University of Light Industry (23/03/2024 - 12/04/2024)
- Co-teaching of “Cosmeceutici di origine naturale” for the “Pharmacy” Course at the University of Camerino (academic year 2023-2024).
- Honours and awards** 2014: Holder of a scholarship from “Pio Sodalizio” Foundation.
- 2018-2019: Holder of a scholarship to take part in an Erasmus + Traineeship programme of 3 months in the Laboratory of Prof. Nuno Maulide in the Department of Organic Chemistry of the University of Vienna.
- 17/07/2024: PSE-Phytochemistry Letters Award for the Best Oral Presentation in the “International Congress on Natural Products Research” held in Kraków, Poland in July 2024.

In compliance with art. 19 and 47 of D.P.R. n. 445/2000, I declare that everything that is declared in this document correspond to the truth.

In compliance with the Italian legislative Decree no. 196 dated 08/07/2003, I hereby authorize you to use and process my personal details contained in this document.