



Francesco Cairone

RESEARCH ASSOCIATE

PhD in Pharmaceutical Science
Hospital Pharmacy Intern

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PhD and Research Fellow at "La Sapienza" University of Rome. Extremely motivated to constantly develop my skills and grow professionally. Gifted with effective communication, predisposed to team collaboration, managing various research projects and organizing teamwork.

h-index = 9

Orcid: 0000-0002-9618-1410

SKILLS

- Organic synthesis; pharmaceutical chemistry and food chemistry; development and optimization of innovative and green procedure in the contest of circular economy.
- Microsoft Office-OpenOffice, ChemDraw, XLStat 2021, Google Chrome, Adobe Photoshop, Paint Shop, Canva, Reaxys, Scifinder, PubMed, Scopus.
- Spectrophotometer UV-Vis (PerkinElmer), NMR (Bruker400 MHz), HPLC-DAD, GC/MS (Jasco), colorimeter CIELab (X-Rite), FT-IR, CO2SFE/SFC (Jasco), fluorimeter (Perkin Elmer), CellInK 3D-bioprinter, LC-MS (Thermo Fisher Scientific).
- Management and project writing of finalized research designs as part of University projects.
- Management of drug supply, movements, AIFA monitoring records.
- Management of drugs involved in experimental studies.
- Management of both oral and infusion antitubercular therapies: validation of drug prescriptions, control of prescriptive appropriateness, verification of compliance of the therapeutic protocol, verification of solvent compatibility and stability of preparations.
- Subject Matter Expert in Pharmaceutical Sciences.

BACKGROUND

University of Rome "Sapienza"

- Postgraduate School of Hospital Pharmacy
- in progress.

University of Rome "Sapienza"

- PhD in Pharmaceutical Science (*Ottimo cum Laude*).
- Functional food, active biomolecules from vegetal foods and food waste.
- 16th Dicembre 2021.

University of Rome "Sapienza"

- Master Degree in Pharmacy (110/110 *cum laude*)
- *Punica granatum L.*: extraction procedure, HPLC-DAD and biological activity evaluation on PDIA3.
- 20th July 2018.

University of Rome "Sapienza"

Achievement, by recognition and passing of 24 college credits (CFU) (2020).

WORK EXPERIENCES

Researcher Associate | 2019- in progress

Dip. Chimica e Tecnologia del Farmaco, Sapienza

- Valorization of industrial waste from bioethanol production: extraction of polyphenolic and carotenoid component from Corn Oil.
- Zero-impact: pomegranate as a model system: From agribusiness waste to resource. Synthesis of dual-action drug-like compounds against cancer and neurodegeneration through proteasomal and lysosomal degradation.

Trainee | 2022 - in progress

ASL-Roma 1, Presidio Nuovo Regina Margherita

Training internship at the Laboratory of Clinical Galenics, UOC Interagency Clinical Pharmacy and DPC

Contract Lecturer | 2023 - 2024

CHEMISTRY OF FOOD AND NATURAL COMPOUNDS- SSD CHIM/06 - 2 – Molecular Biology, Medicinal Chemistry and Computer Science for Pharmaceutical Applications.

LINGUE

Italiano - Madrelingua
Inglese - B1

AWARDS AND HONORS

- Vincitore del Premio come Miglior Poster CHIMALI2023, patrocinato dalla SISSG (2023)
 - Progetto Ai-TechCross- ContaminationLab: sviluppo del software ColorIF, Centro di Ricerca e Servizi Saperi&Co ed Archangel Adventure (2021).
 - Vincitore del Premio di Laurea "Filippo Maria Parisi" (2019).
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CONFERENCE AND POSTER

- Cairone, F., Altieri, F., Gazzino R., Carradori, S., Chichiarelli S., Mulinacci N., Cesa, S.: Punica granatum L.: colorimetric CIEL*a*b* analysis, HPLC-DAD analysis and bioactivity Department of Drug chemistry and Technology "Second Workshop on Research" Roma, 12 Luglio 2018.
- Carradori, S., Locatelli, M., Mocan, A., Cacciagrano F., Cairone F., Palladino L., Cesa S.: Lycium barbarum: extraction, HPLC-DAD analysis and bioactivity evaluation of phytocomplex components. Department of Drug chemistry and Technology "Second Workshop on Research" Roma, 12 Luglio 2018.
- Cairone, F., Carradori, S., Locatelli, M., Mulinacci, N., Giusti A.M., Gazzino R., Cesa, S.: Reflectance colorimetry: a mirror for food quality. XII Italian Food Chemistry Congress, Abstract Book, OC07, pag.40, Camerino, 24-27 Settembre 2018
- Palladino, L., Cairone, F., Cacciagrano, F., Locatelli, M., Carradori, S., Mocan, A., Simonetti, G., Cesa, S.: Colorimetric, HPLC-DAD analysis and bioactivity of Goji phytocomplex components. XII Italian Food Chemistry Congress, Abstract Book, P028, pag.109, Camerino, 24-27 Settembre 2018.
- Cairone, F., Giamogante, F., Altieri, F., Carradori, S., Chichiarelli, S., Cesa, S.: Activity on PDIA3 disulfide isomerase of punicalagins and ellagic acid extracted from Punica granatum L..XII Italian Food Chemistry Congress, Abstract Book, P029, pag.110, Camerino, 24-27 Settembre 2018.
- Cairone, F., Garzoli, S., Carradori, S., Cesa, S.: Strawberry as a functional food: when color relates to health. Summer School Valorization of by-products from agri-food supply chains for the development of functional ingredients, foods and nutraceuticals. San Floriano, (Verona), 24-27 Giugno 2019. **Presentazione orale.**
- Cairone, F., Carradori, S., Garzoli, S., Giusti, A.M., Zengin, G., Cesa S.: Phytocomplex characterization and antioxidant activity evaluation of Elaeagnus angustifolia L.: a functional food? La chimica degli alimenti e i giovani ricercatori: nuovi approcci in tema di qualità, sicurezza e aspetti funzionali di ingredienti alimentari, II Edizione, Milano, 23-24 settembre 2019. **Presentazione orale.**
- Cesa, S., Cairone, F., Carradori S., Garzoli, S.: Effects of processing on Clery strawberry phytocomplex composition. 9th International Conference on Nutrition and Food Science, Barcelona, 13-15 Aprile 2020.
- Borgia, S., Cairone, F., Di Muzio, L., Brandelli, C., Paolicelli P., Casadei M.A., Cesa, S., Petralito S., Trilli J.: Encapsulation of pomegranate peel extracts in egg phosphatidylcholine liposomes. Nanoinnovation, 2020, Roma, 15 settembre 2020.
- Cairone, F., Cesa, S.: Active Biomolecules from functional food and food waste valorization. III Workshop della Ricerca, Dipartimento di Chimica e Tecnologia del Farmaco. Roma, 21-22 Giugno 2022. **Presentazione orale.**
- Cairone, F., Salvitti, C., Iazzetti, A., Fabrizi, G., Pepi, F., Cesa, S.: Pomegranate seeds: a high interest food waste. XXIX Congresso della Divisione di Chimica Analitica della Società Chimica Italiana. Milazzo, 11-15 Settembre 2022.
- Cairone, F., Cesa, S.: Diospyros Kaki L. : selective extraction, colorimetric and HPLC analysis and bioactivity evaluation. Autumn School in Food Chemistry, 1st edition Italian School in Food Chemistry for PhD student. Pavia, 17-18 Ottobre 2022. **Presentazione orale.**
- Palladino, L., Magnante, T., Paglia, L., Umana, E., Gentile, R. L. E., Ferraiuolo, P., Cairone, F.. Daratumumab: valutazione della terapia sottocutanea mediante osservazione clinica. XLIII Congresso Nazionale SIFO, Bologna, 27-30 Ottobre 2022. Poster
- Gentile, R. L. E., Ferraiuolo, P., Palladino, L., Cairone, F., Magnante, T.. Antimicrobial stewardship e distribuzione per conto quale potenziale strumento di governace clinica, appropriatezza e personalizzazione delle cure. X Congresso Nazionale SIFACT 2022, Roma, 24-26 Novembre 2022. Poster
- From drug design to treatment success, what really matter to patients? 27th Congress of the EAHP, Lisbona, 22-24 Marzo 2023.
- Cairone, F., Arpante, I., Di Muzio, L., Iazzetti, A., Salvitti, C., Frachetti, C., Cesa, S.. From waste to worth: pomegranate seeds extraction, characterization and potential applications. XII Congresso Nazionale di Chimica degli Alimenti, Marsala 29-31 Maggio 2023. Poster.
- Cairone, F., Salvitti, C., Arpante, I., Frachetti, C., Filippi, A., Cesa, S.. From agro-food waste to zero-impact source: the pomegranate as a model system. XII Congresso Nazionale di Chimica degli Alimenti, Marsala 29-31 Maggio 2023. **Presentazione orale.**
- Cairone, F., Palladino, L., Paglia, L., Umana, E., Gentile, R., Ferraiuolo, P., Magnante, T.. Nutrizione artificiale nel paziente oncologico: "effectiveness" e osservazione dei "Real World Data". XLIV Congresso Nazionale SIFO, Roma 5-8 Ottobre 2023. Poster.
- Palladino, L., Cairone, F., Paglia, L., Umana, E., Gentile, R., Ferraiuolo, P., Magnante, T.. MEDIA FILL test: Convalida della tecnica aseptica nella parcellizzazione di intravitreali. XLIV Congresso Nazionale SIFO, Roma 5-8 Ottobre 2023. Poster.
- Cairone, F., Palladino, L., Paglia, L., Umana, E., Gentile, R., Ferraiuolo, P., Magnante, T.. Drug-nutrient interactions: new challenges in therapeutic setting. VI Congresso SINuC, Roma 4-6 Ottobre 2023. Poster.
- Gentile, R., Cairone, F., Ferraiuolo, P., Paglia, L., Palladino, L., Umana, E., Magnante, T.. Innovatività e farmacoutilizzazione in DPC degli agonisti recettoriali del GLP-1. XI Congresso Sifact, Verona 19-21 Ottobre 2023. Poster.
- Cairone, F., Palladino, L., Paglia, L., Umana, E., Gentile, R., Ferraiuolo, P., Magnante, T.. Nutritional support in cancer patients: new challenges in therapeutic setting. Congresso Nazionale SINPE, Roma 26-28 Ottobre 2023. Poster.

PUBLICATION

1. Altieri, F., Cairone, F., Giamogante, F., Carradori, S., Locatelli, M., Chichiarelli, S., & Cesa, S. (2019). Influence of Ellagitannins Extracted by Pomegranate Fruit on Disulfide Isomerase PDIA3 Activity. *Nutrients*, 11(1), 186.
2. Mocan, A., Cairone, F., Locatelli, M., Cacciagrano, F., Carradori, S., Vodnar, D. C., ... & Cesa, S. (2019). Polyphenols from *Lycium barbarum* (Goji) Fruit European Cultivars at Different Maturation Steps: Extraction, HPLC-DAD Analyses, and Biological Evaluation. *Antioxidants*, 8(11), 562.
3. Cairone, F., Carradori, S., Locatelli, M., Casadei, M. A., & Cesa, S. (2019). Reflectance colorimetry: a mirror for food quality—mini review. *European Food Research and Technology*, 1-14.
4. Balli, D., Cecchi, L., Khatib, M., Bellumori, M., Cairone, F., & Mulinacci, N. (2020). Characterization of Arils Juice and Peel Decoction of Fifteen Varieties of *Punica granatum* L.: A Focus on Anthocyanins, Ellagitannins and Polysaccharides. *Antioxidants*, 9 (238).
5. Maccelli, A., Cesa, S., Cairone, F., Secci, D., Menghini, L., Chiavarino, B., ... & Locatelli, M. (2020). Metabolic profiling of different wild and cultivated *Allium* species based on high resolution mass spectrometry, HPLC-PDA and color analysis. *Journal of Mass Spectrometry*.
6. Carradori, S., Cairone, F., Garzoli, S., Fabrizi, G., Iazzetti, A., Giusti, A. M., ... & Cesa, S. (2020). Phytocomplex Characterization and Biological Evaluation of Powdered Fruits and Leaves from *Elaeagnus angustifolia*. *Molecules*, 25(9), 2021.
7. Garzoli, S., Cairone, F., Carradori, S., Mocan, A., Menghini, L., Paolicelli, P., ... & Cesa, S. (2020). Effects of Processing on Polyphenolic and Volatile Composition and Fruit Quality of Clery Strawberries. *Antioxidants*, 9(7), 632.
8. Menghini, L., Ferrante, C., Carradori, S., D'Antonio, M., Orlando, G., Cairone, F., ... & Iqbal, K. (2021). Chemical and Bioinformatics Analyses of the Anti-Leishmanial and Anti-Oxidant Activities of Hemp Essential Oil. *Biomolecules*, 11(2), 272.
9. Cairone, F., Simonetti, G., Orekhova, A., Casadei, M. A., Zengin, G., & Cesa, S. (2021). Health Potential of Clery Strawberries: Enzymatic Inhibition and Anti-Candida Activity Evaluation. *Molecules*, 26(6), 1731.
10. Recinella, L., Chiavaroli, A., Masciulli, F., Frascchetti, C., Filippi, A., Cesa, S., ... & Leone, S. (2021). Protective Effects Induced by a Hydroalcoholic *Allium sativum* Extract in Isolated Mouse Heart. *Nutrients*, 13(7), 2332.
11. Cairone, F., Petralito, S., Scipione, L., & Cesa, S. (2021). Study on Extra Virgin Olive Oil: Quality Evaluation by Anti-Radical Activity, Color Analysis, and Polyphenolic HPLC-DAD Analysis. *Foods*, 10(8), 1808.
12. Cairone, F., Cesa, S., Ciogli, A., Fabrizi, G., Goggiamani, A., Iazzetti, A., ... & Ondrejčková, P. (2022). Valorization of By-Products from Biofuel Biorefineries: Extraction and Purification of Bioactive Molecules from Post-Fermentation Corn Oil. *Foods*, 11(2), 153.
13. Cairone, F., Garzoli, S., Menghini, L., Simonetti, G., Casadei, M. A., Di Muzio, L., & Cesa, S. (2022). Valorization of Kiwi Peels: Fractionation, Bioactives Analyses and Hypotheses on Complete Peels Recycle. *Foods*, 11(4), 589.
14. Di Muzio, L., Simonetti, P., Carriero, V. C., Brandelli, C., Trilli, J., Sergi, C., ... & Casadei, M. A. (2022). Solvent Casting and UV Photocuring for Easy and Safe Fabrication of Nanocomposite Film Dressings. *Molecules*, 27(9), 2959.
15. Lasalvia, A., Cairone, F., Cesa, S., Maccelli, A., Crestoni, M. E., Menghini, L., ... & Patruno, A. (2022). Characterization and Valorization of 'Sulmona Red Garlic' Peels and Small Bulbs. *Antioxidants*, 11(11), 2088.
16. Recinella, L., Gorica, E., Chiavaroli, A., Frascchetti, C., Filippi, A., Cesa, S., ... & Leone, S. (2022). Anti-Inflammatory and Antioxidant Effects Induced by *Allium sativum* L. Extracts on an Ex Vivo Experimental Model of Ulcerative Colitis. *Foods*, 11(22), 3559.
17. Cairone, F., Frascchetti, C., Menghini, L., Zengin, G., Filippi, A., Casadei, M. A., & Cesa, S. (2023). Effects of Processing on Chemical Composition of Extracts from Sour Cherry Fruits, a Neglected Functional Food. *Antioxidants*, 12(2), 445.
18. Cesa, S., Cairone, F., & De Monte, C. (2022). Polyphenols and Flavonoids. *Flavonoids and Phenolics*, 1, 1-26.
19. Cairone, F., Salvitti, C., Iazzetti, A., Fabrizi, G., Troiani, A., Pepi, F., & Cesa, S. (2023). In-Depth Chemical Characterization of *Punica granatum* L. Seed Oil. *Foods*, 12(8), 1592.
20. Frascchetti, C., Goci, E., Nicolescu, A., Cairone, F., Carradori, S., Filippi, A., ... & Cesa, S. (2023). Pomegranate Fruit Cracking during Maturation: From Waste to Valuable Fruits. *Foods*, 12(9), 1908.
21. Aceto, G., Di Muzio, L., Di Lorenzo, R., Laneri, S., Cairone, F., Cesa, S., ... & Casadei, M. A. (2023). Dual delivery of ginger oil and hexylresorcinol with lipid nanoparticles for the effective treatment of cutaneous hyperpigmentation. *Journal of Drug Delivery Science and Technology*, 104790.
22. Cairone, F., Allevi, D., Cesa, S., Fabrizi, G., Goggiamani, A., Masci, D., & Iazzetti, A. (2023). Valorisation of Side Stream Products through Green Approaches: The Rapeseed Meal Case. *Foods*, 12(17), 3286.

I AUTHORIZE THE PROCESSING OF PERSONAL DATA CONTAINED IN MY CV EX ART. 13 OF LEGISLATIVE DECREE 196/2003 AND ART. 13 OF EU REGULATION 2016/679 ON THE PROTECTION OF INDIVIDUALS WITH REGARD TO THE PROCESSING OF PERSONAL DATA

Roma, 21/12/2023

