





## PERSONAL INFORMATIONS

**Prof. Maria Carla Marcotullio**

-  Department of Pharmaceutical Sciences (DSF) – University of Perugia (UNIPG)
-  +39 075 585 7215
-  mariacarla.marcotullio@unipg.it
-  <https://www.scopus.com/authid/detail.uri?authorId=35605637500>

## WORK EXPERIENCE

- 2014 National Scientific Qualification for the functions of full professor – **S.C. 05/A1 – Botany**
- 2005 – CURRENT **Associate Professor (S.S.D. BIOS-01/D – Pharmaceutical Biology)**  
Department of Pharmaceutical Sciences – University of Perugia
- 1990 – 2005 **Research assistant (S.S.D. CHEM-05/A)**  
Faculty of Pharmacy – University of Perugia
- 1986 – 1990 **Graduate technician**  
Faculty of Pharmacy – University of Perugia

## EDUCATION

- 1985 – 1986 **Post-graduate researcher**  
Faculty of Pharmacy – University of Perugia
- 1985 **Pharmacist qualification**
- 1985 **Degree in Pharmaceutical Chemistry and Technology**  
summa cum laude  
University of Perugia

COORDINATION, ATTENDANCE  
IN COMMITTEES AND OFFICIAL  
APPOINTEMENTS

- 2023-CURRENT Member of the Erasmus Committee of the DSF-UNIPG
- 2013 – 2025 Member of the Scientific Board of the Italian Society of Phytochemistry (SIF)
- 2023 Member of the Coordination Committee of the Master's Degree in Pharmacy (DSF-UNIPG)
- 2017 – 2023 Coordinator of the Master's Degree in Pharmacy (DSF-UNIPG)
- 2017-2023 Member of the Teaching Committee of DSF-UNIPG
- 2020 - CURRENT Member of the PhD Board in Pharmaceutical Sciences (DSF-UNIPG)
- 2016 – 2017 Member of the Steering Committee of the Master's Degree in Pharmacy (DSF-UNIPG)
- 2015 – 2023 Delegate of the DSF-UNIPG for the Technical and Scientific Committee for Library Services
- 2014-2024 Responsible for a framework agreement for the exchange of students between UNIPG and the Universidad de Sonora (Hermosillo, Mexico)
- 2014 - 2019 Member of the PhD Board in Biotechnology (DCBB-UNIPG)
- 2007 - 2013 Member of the PhD Board in Pharmaceutical Chemistry and Technology

**MEMBERSHIP**

1985 - CURRENT	Italian Society of Phytochemistry (SIF)
2007 – CURRENT	Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung e.V. (GA)
2018 – CURRENT	Italian Society of Botany (SBI)

**TEACHING ACTIVITY**

In the early years (Academic Year 1994/1995 – Academic Year 2004/2005), Professor Marcotullio taught courses in the CHEM-05/A specialization area as a tenured researcher in this field. Beginning in the Academic Year 2005/2006, following her transition to Associate Professor in the BIOS-01/D (formerly BIO-15) specialization area, she focused on courses in that specialization while continuing to teach Organic Chemistry to meet the needs of the Faculty of Pharmacy. These courses were taught for the Master's Degree programs in Pharmacy and CTF, as well as for the three-year degree programs in Scientific Information on Medicines and Herbal Techniques, until their discontinuation.

Currently teaching:

**Plant Biology and Pharmaceutical Botany** (6 CFU; Pharmacy); **Pharmaceutical Botany** (6 CFU; QUASAL); **Identification of Medicinal Plants and Herbal Drugs** (7 CFU; Pharmacy); **Herbal Products** (3CFU; SANU); **Medicinal Plants and Herbal Products** (4 CFU; Pharmacy)

Prof. Marcotullio has been involved in orientation activities within PCTO (Pathways for Transversal Skills and Orientation) programs for many years, conducting both classroom lectures and laboratory experiences.

She has been the supervisor and/or co-supervisor of more than **140** master's theses, mainly of students from the CdL in Pharmacy, but also CTF and SANU.

Professor Marcotullio also teaches post-graduate and doctoral programs.

Tutor of 6 PhD students (Dr Eleonora Manuali, Samir Scandar, Giulia Gigliarelli, Federica Messina, Gildas Norbert Oball Mond Mwankie, Federica Maltese).

Co-tutor of a PhD thesis of the University of Sonora- Hermosillo (Mexico) (Dr. Heriberto Torres Moreno).

Co-tutor of 6 experimental master's theses of ERASMUS incoming students.

Co-tutor of 4 experimental master's theses of Mexican students within the scope of the framework agreement with the University of Sonora (Hermosillo, Mexico).

Reviewer of National PhD theses: University of Salerno (Dott.ssa Shiva Pouramin Arabi); University of Pisa (Dott. Mauro Di Stasi); University of Padua (Dott.ssa Vanessa Dalla Costa)

**PRINCIPAL  
INVESTIGATOR AND  
MEMBER OF RESEARCH  
PROJECTS**

2025	“Innovation, digitalisation and sustainability for the diffused economy in Central Italy – VITALITY”. <b>Member of unit research</b>
2023	UNIPG WP6.1: FRA2022 “Valorizzazione di colture cerealicole e scarti della catena dell’olivo per la produzione di materiali biobased e biodegradabili”. <b>Member of unit research</b>
2019	UNIPG: “Preparazione, Caratterizzazione e Studio delle Proprietà Biologiche di Olio Essenziale di <i>Coriandrum sativum</i> L.”. <b>PI</b>
2015	UNIPG: “Valutazione della bioattività di metaboliti secondari da <i>Bursera microphylla</i> ” <b>PI</b>
2014	Cassa di Risparmio di Terni e Narni: “Resine dal Messico”. <b>Scientific coordinator</b>

## SCIENTIFIC BOARD AND CONFERENCE ORGANIZING COMMITTEE MEMBERSHIP

Prof. Marcotullio was part of the organizing committee of numerous events of the Italian Society of Phytochemistry.

- 2018 Workshop “Chimica e Natura: due parole in sinergia e non in contrapposizione” – Perugia December 7.
- 2006 XV Congress of SILAE “Ivano Morelli” – Perugia September 23-26.
- 1988 “Le Ombrellifere” – Assisi (PG) September 29-30

Furthermore, as a member of the SIF Steering Committee, he participated in the scientific committees of numerous events (Schools, Conferences, and Congresses) organized and sponsored by the SIF, she was part of the organizing committee of numerous events.

## ORAL COMMUNICATIONS

### Invited Lectures at the SIF School “P. Ceccherelli”

- 2010 Metaboliti secondari ad azione antiossidante- Antiossidanti di origine naturale - Tirrenia (PI), 30 September-2 October
- 2005 Cumarine: Classificazione e biosintesi” Perugia, 20-22 October
- 2004 Gli alcaloidi indolici: Classificazione, nomenclatura e correlazione fra gli scheletri più importanti - Riolo Terme, 21-23 October
- 2003 Gli alcaloidi isochinolinici utilizzabili quali markers chemotassonomici - Riolo Terme, 16-18 October
- 2001 Sintesi di Cumarine: passato e presente - Frascati, 19-20 October

### Invited Lectures at National and International Congresses

Prof. Marcotullio is the coauthor of 109 communications (oral and poster presentations) at national and international congresses.

Invited plenary lectures:

1. XXV Congress of the International Society of Ethnopharmacology: **M.C. Marcotullio** - Bioactive resins: Bridging ethnomedicine and modern therapeutics. Foligno (PG), 14-17 September 2026
2. 3rd Symposium on Polymeric Biomaterials: **M.C. Marcotullio** - Boosting *Myristica fragrans* and *Coriandrum sativum* essential oil using choline chloride-based NADES. Hermosillo, Mexico 4-5 June 2024
3. XXI Italo-Latin American Society of Ethnomedicine: **M.C. Marcotullio**, F. Messina, O. Rosati, M. Curini - *C. erythraea*: ancient myth, modern uses. Paestum (SA), 25-29 September 2012
4. XVII Congress of the Italian Society of Phytochemistry, joint with the 3rd International Congress on Edible, Medicinal and Aromatic Plants (ICEMAP): **M.C. Marcotullio**, D. Lanari, C. Zadra, F. Negro, R. Njem - Influence of Choline chloride-based NADES on the composition of *Myristica fragrans* Houtt. essential oil. Bari, 22-24 June 2022
5. IV Joint Congress on Medicinal Plants – FITOMED 2010: **M.C. Marcotullio**, F. Messina, L. Giamperi, A. Bucchini, D. Ricci, M. Curini – Furanosesquiterpeni da *Commiphora erythraea* e loro attività biologica, Cagliari, 23-26 June 2010

6. XVII Italo-Latin American Society of Ethnomedicine “Bernardino D’Ucria”: **M.C. Marcotullio**, C. Santi, G.N. Oball-Mond Mwankie, M. Curini - Phytochemical study of *Commiphora erythraea*. Palermo, 16-21 September 2008

## EDITORIAL AND REFEREE ACTIVITIES

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### SECTION BOARD MEMBER

Molecules –Board Member for the Section 'Natural Products Chemistry'

### GUEST EDITOR

Molecules: Guest editor of the special issue “Essential Oils: Chemical Composition, Bioactive, and Application.”

Journal of Functional Biomaterials, Guest editor of the special issue “Natural Product-Based Biomaterials for Advanced Wound Dressings.”

Molecules, Guest editor of the special issue “Natural Products in Italy.”

Molecules, Guest editor of the special issue “Qualitative and Quantitative Analysis of Bioactive Natural Products.”

### REFEREE

Food Chemistry; Industrial Crops and Products; Journal of Food Biochemistry; Molecules; Natural Product Research; Plants; Phytochemistry; Fitoterapia; Journal of Agricultural and Food Chemistry.

### BOOKS AND ARTICLES

#### BOOK CHAPTERS

**M.C. Marcotullio** - *Sarcodon* Mushrooms: Biologically Active Metabolites in: Phytochemicals - Bioactivities and Impact on Health, Iraj Rasooli (Ed.), ISBN: 978-953-307-424-5, InTech.: doi: 10.5772/27477

F. Messina, O. Rosati, M. Curini, **M.C. Marcotullio** - Chapter 2 - Cannabis and Bioactive Cannabinoids in Studies in Natural Products Chemistry, Volume 45, 2015, Pages 17-57 DOI:10.1016/B978-0-444-63473-3.00002-2

#### ARTICLES

**M.C. Marcotullio**, R. Pagiotti, Y. Obara - Diterpeni ciananici da *Sarcodon cyrneus* e loro attività nella promozione della differenziazione neurale – Natural1, 2006, 58, 44-47

F. Messina, **M.C. Marcotullio** - La Mirra tra passato e futuro - Natural1, 2010, 98, 36-40

#### BOOK

**M.C. Marcotullio** – Chimica delle Sostanze Naturali – GEDI Digital S.r.l. - <https://ilmiolibro.kataweb.it/libro/scienza-e-tecnica/101302/chimica-delle-sostanze-organiche-naturali-2>

## SCIENTIFIC RESEARCH

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The scientific activity, documented by **138** publications in international journals, mainly concerned with the isolation and structural determination of secondary metabolites from plants and mushrooms, the analysis of plant extracts, the preparation and analysis of essential oils, and the synthetic modification of natural secondary metabolites.

ORCID ID: 0000-0001-9079-135X

SCOPUS Author ID: 35605637500

## BIBLIOMETRIC DATA

 Scopus  
(04/27/2026)

 Publications: 138  
h-index: 38  
citations: 3834

(✉Corresponding Author)

## Pubblicazioni

Selected top 10 publications in the last 10 years (2016-current)

S. Scandar, N.R. Mustafa, C. Zadra, **M.C. Marcotullio**,<sup>✉</sup> Y.H. Choi. Development of essential oil diffusion matrices using non-ionic surfactants-supported NADES and hydrophobic NADES. *Analyst*, **2025**, *150*, 425-434. DOI: 10.1039/d4an01161a

G.W.A. Abualzulof, S. Scandar, I. Varfaj, V. Dalla Costa, R. Sardella, R. Filippini, A. Piovan, **M.C. Marcotullio**.<sup>✉</sup> The effect of maturity stage on polyphenolic composition, antioxidant and anti-tyrosinase activities of *Ficus rubiginosa* Desf. ex Vent. extracts. *Antioxidant*, **2024**, *13*, 1120. DOI: 10.3390/antiox13091129

S. Scandar, C. Zadra, D. Lanari, **M.C. Marcotullio**.<sup>✉</sup> Boosting the essential oil yield of *Coriandrum sativum* L. using choline chloride-based NADES: an optimized and systematic study employing response surface methodology (RSM). *Ind. Crops Prod.*, **2024**, *208*, 117920. DOI: 10.1016/j.indcrop.2023.117920

F. Ianni, S. Scandar, L. Mangiapelo, F. Blasi, **M.C. Marcotullio**, L. Cossignani. NADES-assisted extraction of polyphenols from Coriander seeds: A systematic optimization study. *Antioxidant*, **2023**, *12*, 2048. DOI: 10.3390/antiox12122048

D. Lanari, C. Zadra, F. Negro, R. Njem, **M.C. Marcotullio**.<sup>✉</sup> Influence of choline chloride-based NADES on the composition of *Myristica fragrans* Houtt. essential oil. *Heliyon*, **2022**, *8*, e09531. DOI: 10.1016/j.heliyon.2022.e09531

S. Adoriso, L. Giamperi, A.A. Bucchini, D.V. Delfino, **M.C. Marcotullio**.<sup>✉</sup> Bioassay-Guided Isolation of Antiproliferative Compounds from *Limbarda crithmoides* (L.) Dumort. *Molecules*, **2020**, *25*, 1893. DOI: 10.3390/molecules25081893

G. Rocchetti, F. Blasi, D. Monetsano, S. Ghisoni, **M.C. Marcotullio**, S. Sabatini, L. Cossignani, L. Lucini. Impact of conventional/non-conventional extraction methods on the untargeted phenolic profile of *Moringa oleifera* leaves. *Food Res. Internat.*, **2019**, *115*, 319-327. DOI: 10.1016/j.foodres.2018.11.046

E.W. Coronado-Aceves, G. Gigliarelli, A. Garibay-Escobar, M. Curini, J. López Cervantes, C.I. Espitia-Pinzón, **M.C. Marcotullio**.<sup>✉</sup> New Isoflavanones and Isoflavones from the Extract of *Rhynchosia precatoria* (Humb. & Bonpl. ex Willd.) DC. and their antimycobacterial activity. *J. Ethnopharm.*, **2017**, *206*, 92-100. DOI: 10.1016/j.jep.2017.05.019

G. Cobellis, M. Trabalza-Marinucci, **M.C. Marcotullio**, Z. Yu. Evaluation of different essential oils in modulating methane and ammonia production, rumen fermentation, and rumen bacteria in vitro. *Anim. Feed Sci. Tech.*, **2016**, *215*, 25-36.

DOI: 10.1016/j.anifeedsci.2016.02.008

G. Gliarelli, J. X. Becerra, M. Curini, **M. C. Marcotullio**. ✉ Chemical composition and biological activities of fragrant Mexican copal (*Bursera* spp.). *Molecules*, **2015**, *20*, 22383–22394. DOI: 10.3390/molecules201219849

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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.

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Perugia, li 27/04/2026

M. Carla Marcotullio