

Donatella Ambroselli

PhD student

PROFESSIONAL PROFILE

My current research is focused on food chemistry, characterisation and monitoring the foodstuff metabolic profiles by means of advance methodologies as NMR (Nuclear Magnetic Resonance) and HPLC (High Performance Liquid Chromatography). My study is aimed to characterize the chemical profile of matrices plants, such as medicinal plants like dandelion, burdock, and lemon balm. The knowledge of the chemical composition allows to identify the proper application for the development of new nutraceutical products and functional foods. In addition, I am approaching the development of extractive techniques for the metabolomic analysis of bacteria and lichens implicated in artwork preservation.

EXPERIENCE

Rome

December 2021 - Present

PhD student

Department of Chemistry and Technology of Drugs, Sapienza University of Rome
Molecular design and characterization for the promotion of health and well-being: from drug to food

PhD Supervisor: Prof. Luisa Mannina

Marseille - France

February 2023 - July 2023

Visiting PhD

Centre Interdisciplinaire de Nanoscience de Marseille (CINaM), University of Marseille
Study of natural plant mixtures (essential oils, essential extracts) with high biological value, using combined approaches between Nuclear Magnetic Resonance (NMR) and Mass Spectrometry (MS) approaches.

PhD Supervisor: Prof. Aura Tintaru

Corsica - France

July 2023

Internship

Laboratory of Natural Products Chemistry, University of Corsica
Production and analysis of essential oils from vegetables matrices by applying GC/MS.

Supervisor: Prof. Alain Muselli

Rome

October 2022 - January 2023

Tutoring

Department of Pharmacy and Medicine, Biomedical Scientific Communication, Sapienza University of Rome
Chemistry lessons and university support activities for students.

Rome

May 2023 - July 2023

Tutoring

Department of Chemistry and Technology of Drugs, Sapienza University of Rome
Math lessons and university support activities for students.

Rome

April 2021 - July 2021

Research Fellow

Department of Chemistry and Technology of Drugs, Sapienza University of Rome
Study on the chemical characterization of foodstuffs and on the metabolic profile investigation of biological fluids by applying HPLC and NMR methodologies.

Rome
July 2017 - February 2018

Pharmacy internship

Farmacia Casalbertone - Rome

- Galenic drug preparation
- Medication procurement and stock control
- Sales of pharmaceutical and para-pharmaceutical products under the supervision of trained employee

EDUCATION

Rome
2021

Pharmacist license

Sapienza University of Rome

Rome
2020

Master's degree in Chemistry and Pharmaceutical Technologies

Sapienza University of Rome

Grade: 107/110

Thesis: "Identificazione di biomarkers predittivi di Leucoencefalopatia Multifocale Progressiva (PML) causata dal Polyomavirus umano JC (JCPyV) in pazienti affetti da Sclerosi Multipla (SM) in trattamento con Natalizumab"

Identification of gene sequences by PCR (Polymerase Chain Reaction), Real Time PCR and gel electrophoresis.

Advisors: Prof. Valeria A. Pietropaolo

- Molecular diagnosis of Human Polyomavirus JC in patients affected by autoimmune diseases for the risk of possible reactivation of the virus and subsequent development of progressive multifocal leukoencephalitis (PML).
- Study of BK and JC human Polyomavirus control region sequences and cellular molecular pathways implicated in oncogenic and pathogenic activity of these viruses as possible predictive markers of virulence.
- *In vivo* and *in vitro* cell culture study of the JC virus functional rearrangements transcription control region in different lymphocyte clusters isolated from patients affected by immune-mediated diseases and treated with biological drugs in association to gene expression of cellular transcription factors.

GRANTS

Rome
April 2021 Department of Chemistry and Technology of Drugs, Sapienza University of Rome
Fellow Young Research

Rome
*December 2021-
November 2023* Department of Chemistry and Technology of Drugs, Sapienza University of Rome
Research Grant from Ministry of Economic Development (MiSE)

Rome
February 2023 Sapienza University of Rome
Grant Agreement for International Mobility

LANGUAGES

Italian

Native speaker

English

Good both written and spoken

SKILLS FIELDS

Chemistry - Food Chemistry - NMR - HPLC

Pharmacy

Virology

Microbiology

PUBLICATIONS

- Prezioso, C., Ciotti, M., Obregon, F., **Ambroselli, D.**, Rodio, D. M., Cudillo, L., Gaziev, J., Mele, A., Nardi, A., Favalli, C., Arcese, W., Palamara, A. T., & Pietropaolo, V. (2019). Polyomaviruses shedding in stool of patients with hematological disorders: detection analysis and study of the non-coding control region's genetic variability. *Medical microbiology and immunology*, 208(6), 845854. <https://doi.org/10.1007/s00430-019-00630-9>
- Prezioso, C., Obregon, F., **Ambroselli, D.**, Petrolo, S., Checconi, P., Rodio, D. M., Coppola, L., Nardi, A., Vito, C., Sarmati, L., Andreoni, M., Palamara, A. T., Ciotti, M., & Pietropaolo, V. (2020). Merkel Cell Polyomavirus (MCPyV) in the Context of Immunosuppression: Genetic Analysis of Noncoding Control Region (NCCR) Variability among a HIV-1-Positive Population. *Viruses*, 12(5), 507. <https://doi.org/10.3390/v12050507>
- Spano, M.; Di Matteo, G.; Ingallina, C.; **Ambroselli, D.**; Carradori, S.; Gallorini, M.; Giusti, A.M.; Salvo, A.; Grosso, M.; Mannina, L. Modulatory Properties of Food and Nutraceutical Components Targeting NLRP3 Inflammasome Activation. *Nutrients* 14(3), 490. <https://doi.org/10.3390/nu14030490>
- Masciulli F., **Ambroselli D.**; Romano E. and Mannina L. (2022) The Smell of the Kitchen. *Front. Young Minds*. 10:914163. doi: 10.3389/frym.2022.914163.
- **Ambroselli D.**, Masciulli F.; Romano E.; Catanzaro G.; Besharat Z.M., Massari M.C, Ferretti E., Migliaccio S., Izzo L., Ritieni A; Grosso M.; Formichi C.; Dotta F; Frigerio F; Barbiera E; Giusti A. M.; Ingallina C. and Mannina L. (2022) New advances in metabolic syndrome, from prevention to treatment: the role of diet and food *Nutrients*
- Climate change and cultural heritage: a unique and fragile interaction M. Kratter, F. Benedetti, F. Mura, C. Ingallina, **D. Ambroselli**, L. Nigro, T. Rinaldi [**Abstract conference proceedings**]

POSTERS

- *Polyomaviruses stool shedding in patients with hematological disorders: detection analysis and study of the non-coding control region genetic variability* presented at **47° Congresso Nazionale della Società Italiana di Microbiologia**, Rome (Italy), 18 - 21 September 2019.
- *NMR metabolomic profiling of fresh Goji berries from two varieties grown in Lazio* presented at **VII workshop Applicazioni della Risonanza Magnetica nella Scienza degli Alimenti**, Rome (Italy), 23-24 June 2022.
- *Cauliflower by-products valorization by applying NMR based metabolomics at Italian-French International Conference on Magnetic Resonance*, Milan, 27-30 September 2022.
- *Valorization of agro-food waste into artichoke and cauliflower by-products-based food supplements at Chimali 2023*, Marsala, 29-31 May 2023
- *Biodiversity within melissa officinalis by applying NMR based metabolomics at 50th National Congress on Magnetic Resonance*, Rome, 6-8 September 2023

PARTECIPATION IN CONFERENCES

- **47° Congresso Nazionale della Società Italiana di Microbiologia**
Rome, SIM 2019
- **48° Congresso Nazionale della Società Italiana di Microbiologia**
Virtual SIM 2020
- **Workshop ORTOPACKHEALTH - Il packaging per gli alimenti ad alto valore nutrizionale: metodologie avanzate per nuove soluzioni**
Rome, 16 June 2021
- **Workshop "PRODUZIONE DI BIOSTIMOLANTI A PARTIRE DA SCARTI DI CARCIOFO E CAVOLFIORÉ"**
Rome, 27 May 2022
 - Oral communication
- **VII Workshop - Applicazioni della Risonanza Magnetica nella Scienza degli Alimenti**
Rome, 23-24 June 2022
- **Workshop FITO-BIO "Caratterizzazione multi-metodologica di piante officinali"**
Rome, 9 September 2022
 - Oral communication
- **Italian-French International Conference on Magnetic Resonance,**
Milan, 27-30 September 2022
- **XIII CONGRESSO NAZIONALE DI CHIMICA DEGLI ALIMENTI, Chimali 2023, Marsala, 29 - 31 May 2023**
- **50th National Congress on Magnetic Resonance,**
Rome, 6-8 September 2023
- **Workshop SISA - Alimentazione e attività fisica per il benessere dell'individuo,**
Rome, 21 September 2023

PARTECIPATION IN DOCTORAL SCHOOLS

- **Autumn School in Food Chemistry**
Pavia, 17-18 October 2022
- Short communication

TECHNICAL SKILLS

Software

- Microsoft Office

Operating system

- Mac
- Windows