Mattia Spano

EDUCATION AND TRAINING

November 2021 – Present

Post-Doc position

Sapienza University of Rome – Department of Chemistry and Technologies of Drugs, P.le Aldo Moro 5, 00185 Rome, Italy.

Supervisor: prof. Luisa Mannina

November 2018 – October 2021

Ph.D in Pharmaceutical Sciences (XXXIV cycle)

Sapienza University of Rome – Department of Chemistry and Technologies of Drugs, P.le Aldo Moro 5, 00185 Rome, Italy.

TUTOR: prof. Luisa Mannina

- Thesis title: Metabolomic characterization of food matrices by using high-resolution liquid state NMR

April 2021 – July 2021

Aboard period at Institut de Chimie Radicalaire (ICR), University Aix-Marseille

TUTOR: prof. Aura Tintaru

October 2013 – July 2018

Master's Degree in Pharmaceutical Chemistry and Technology achieved with full marks (110/110 cum laude)

"G. D'Annunzio" University of Chieti-Pescara – Department of Pharmacy, Via dei Vestini 31, 66013 Chieti, Italy.

TUTOR: prof. Simone Carradori

- Thesis title: Synthesis of new carvacrol derivatives with potential anti-*Helicobacter pylori* activity

EDUCATION AND TRAINING

2021-2022

One-year teaching contract at telematic University "Universitas Mercatorum" for the teaching course of "General Chemistry", Ingegneria delle infrastrutture e della mobilità (L-7)

LANGUAGES KNOWLEDGE

Mother tongue: Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
French	A2	A2	A2	A2	A1

AWARDS

Sapienza University of Rome. Borsa di mobilità all'estero per studenti di dottorato. Grant (€): 6000

PRINCIPAL INVESTIGATOR OF RESEARCH CONTRACTS

Framework: Sapienza – Progetti per Avvio alla Ricerca - Tipo 2 2021

Title: Analisi metabolomica NMR di urine per l'identificazione di biomarcatori di aderenza alla dieta mediterranea in giovani studenti Sapienza. Grant (€): 2200

Framework: Sapienza – Progetti per Avvio alla Ricerca - Tipo 1 2020

Title: Caratterizzazione chimica di estratti di radice di Gentiana lutea L. e Gentiana dinarica Beck

abruzzese attraverso un approccio multimetodologico. Grant (€): 1000

PARTICIPATION TO PROJECTS

Framework **Sapienza – University Research Project 2018**
Title "La Canapa industriale: sviluppo e valorizzazione di una nuova filiera agroalimentare ecosostenibile"
Role Participant; member of the research team.

Framework **Sapienza – University Research Project 2019**
Title "Identificazione di biomarcatori di aderenza alla Dieta Mediterranea in una popolazione universitaria di Sapienza (GONG) mediante analisi metabolomica NMR"
Role Participant; member of the research team.

ORGANIZATION OF MEETINGS, CONFERENCES, WORKSHOPS

6 May 2019 New Horizons in cannabis research: medical and food applications– Sapienza University of Rome.
Role Secretariat

22 September 2020 La canapa industriale: sviluppo e valorizzazione di una nuova filiera agroalimentare ecosostenibiles– Sapienza University of Rome.
Role Secretariat

SEMINARS

18 October 2019 "Metodologie avanzate nello studio dei prodotti della filiera della Cannabis Sativa"– Master di II livello in "I Manager Chiave nell'Azienda Nutraceutica e Cosmeceutica", Sapienza University of Rome.

TUTORING ACTIVITY

University of Chieti-Pescara "G. D'Annunzio": Tutoring activity for students in Inorganic Chemistry (academic year: 2017/2018)

Sapienza University of Rome: Tutoring activity for high school students for the activity "How to write a scientific paper" (academic years: 2018/2019, 2019/2020, 2020/2021)

Sapienza University of Rome: Tutoring activity for students in Inorganic Chemistry (academic year: 2020/2021)

MEMBERSHIP

Member of the Italian Group of Magnetic Resonance Discussion (GIDRM) since 2019

Member of the Italian Chemistry Society (SCI) since 2020

Member of the Italian Society of Food Chemistry (ITACHEMFOOD) since 2020

PARTICIPATION TO SCHOOLS

XXI Scuola Nazionale di Risonanza Magnetica Nucleare - GIDRM/Università di Torino, Torino, 7-12 Luglio 2019

XXII Scuola Nazionale di Risonanza Magnetica Nucleare - GIDRM/Università di Torino, Modalità telematica, 20-23 Luglio 2020

Giornate di Approfondimento te(le)matico in Chemiometria 2020-DIFAR/Università di Genova, Modalità telematica, 11 e 18 Dicembre 2020

Winter School 2022, Introduzione alla spettroscopia NIR – SISNIR, Milano, 11-13 Gennaio 2022

POSTER CONTRIBUTIONS

1 M. Spano, A.P. Sobolev, D. Capitani, E. Campiglia, S. Balducci, C. Ingallina, A.M. Giusti, G. Vinci, S. Ciano, L. Mannina. "NMR characterization of hemp products from Lazio". *XLVIII National Congress on Magnetic Resonance*. L'Aquila, 11-13 September 2019

2 M. Spano, A.P. Sobolev, D. Capitani, E. Campiglia, S. Balducci, C. Ingallina, A.M. Giusti, G. Vinci, S. Ciano, L. Mannina. "Metabolic profile of hemp flowers from Lazio: an NMR study". *Advances in NMR and MS-based Metabolomics*. Lucca, 20-22 November 2019.

3 M. Spano, C. Ingallina, A.P. Sobolev, C. Esposito, C. Santarcangelo, A. Baldi, M. Daglia, L. Mannina. "NMR and UPLC-ESI-MS/MS characterization of potato cultivars from North Italy". *Foodomics 6th edition*. Cesena, 14-16 October 2020.

4. M. Spano, A.P. Sobolev, G. Di Matteo, A. Tintaru, L. Mannina. "NMR metabolite profile of hemp products: the case of inflorescences and hemp seed oil". *Journées RMN du Grand Sud 2021*. Clermont Ferrand, 1-2 July 2021

ORAL CONTRIBUTIONS

1. **M. Spano**, A.M. Giusti. "Clorofille e carotenoidi nelle varietà monoiche di *Cannabis sativa* L.: influenza delle pratiche agronomiche". *La Canapa industriale: sviluppo e valorizzazione di una nuova filiera agroalimentare ecosostenibile. Primo anno di attività*. Viterbo, 4 July 2019

2. **M. Spano**. "Studio del profilo metabolomico di infiorescenze di canapa monoica durante la crescita". *La Canapa industriale: sviluppo e valorizzazione di una nuova filiera agroalimentare ecosostenibile*. Roma (online meeting), 22 September 2020

3. **M. Spano**. "*Cannabis sativa* L. inflorescences chemical profiling through a multimethodological approach". *Foodomics 6th edition*. Cesena, 14-16 October 2020

4. **M. Spano.** "Profilo NMR metabolomico di campioni di zucca protetti da biofilm". *Progetto ORTOPACKHEALTH: Il packaging per gli alimenti ad alto valore nutrizionale: metodologie avanzate per nuove soluzioni*. Roma (online meeting), 16 June 2021

5. **M. Spano.** "NMR metabolite profile of hemp products: the case of inflorescences and hemp seed oil". *Journées RMN du Grand Sud 2021*. Flash presentation, Clermont Ferrand, 1-2 July 2021

6. **M. Spano.** "Hemp products: NMR characterization of inflorescences and hemp seed oils". *XLIX National Congress on Magnetic Resonance*. Online congress, 8-10 September 2021

LIST OF PUBLICATIONS

Papers in peer-reviewed journals:

Number of publications with first name/co-first name: 6

1 C. Ingallina, A. Cerreto, L. Mannina, S. Circi, S. Vista, D. Capitani, **M. Spano**, A. P. Sobolev, F. Marini. *Extra-virgin olive oils from nine Italian regions: an ^{1}H NMR-chemometric characterization*. Metabolites, (2019), 9 (4) DOI: 10.3390/metabo9040065.

2 C. Ingallina, A. P. Sobolev, S. Circi, **M. Spano**, A. M. Giusti, L. Mannina. *New Hybrid Tomato Cultivars: An NMR-Based Chemical Characterization*. Applied sciences, (2020), 10 (5) 1887 pp. DOI: https://doi.org/10.3390/app10051887.

3 C. Ingallina, A. P. Sobolev, S. Circi, **M. Spano**, C. Fraschetti, A. Filippi, A. Di Sotto, S. Di Giacomo, G. Mazzoccanti, F. Gasparrini, D. Quaglio, E. Campiglia, S. Carradori, M. Locatelli, G. Vinci, M. Rapa, S. Ciano, A. M. Giusti, B. Botta, F. Ghirga, D. Capitani, L. Mannina. *Cannabis sativa L. inflorescences from monoecious cultivars grown in Central Italy: an untargeted chemical characterization over the season*. Molecules, (2020), 25 (8) DOI: https://doi.org/10.3390/molecules25081908.

4 Veschi, S.; Carradori, S.; De Lellis, L.; Florio, R.; Brocco, D.; Secci, D.; Guglielmi, P.; **Spano, M.**; Sobolev, A.P.; Cama, A. *Synthesis and evaluation of a large library of nitroxoline derivatives as pancreatic cancer antiproliferative agents*. J. Enzyme Inhib. Med. Chem. (2020), 35 (1) DOI: https://doi.org/10.1080/14756366.2020.1780228.

5 Di Matteo, G.; **Spano, M.**; Grosso, M.; Salvo, A.; Ingallina, C.; Russo, M.; Ritieni, A.; Mannina, L. *Food and COVID-19: Preventive/Co-therapeutic Strategies Explored by Current Clinical Trials and in Silico Studies*. Foods (2020), 9 (8) DOI: https://doi.org/10.3390/foods9081036.

6 Ingallina, C.; **Spano, M.**; Sobolev, A.P.; Esposito, C.; Santarcangelo, C.; Baldi, A.; Daglia, M.; Mannina, L. *Characterization of Local Products for Their Industrial Use: The Case of Italian Potato Cultivars Analyzed by Untargeted and Targeted Methodologies*. Foods (2020), 9 (9) DOI: https://doi.org/10.3390/foods9091216.

7 Spano, M.; Di Matteo, G.; Rapa, M.; Ciano, S.; Ingallina, C.; Cesa, S.; Menghini, L.; Carradori, S.; Giusti, A.M.; Di Sotto, A.; Di Giacomo, S.; Sobolev, A.P.; Vinci, G.; Mannina, L. *Commercial Hemp Seed Oils: A Multimethodological Characterization*. Appl. Sci. (2020), 10 (19) DOI: https://doi.org/10.3390/app10196933.

8 Ingallina, C.; Maccelli, A.; **Spano, M.**; Di Matteo, G.; Di Sotto, A.; Giusti, A.M.; Vinci, G.; Di Giacomo, S.; Rapa, M.; Ciano, S.; Fraschetti, C.; Filippi, A.; Simonetti, G.; Cordeiro, C.; Silva, M.S.; Crestoni, M.E.; Sobolev, A.P.; Fornarini, S.; Mannina, L. *Chemico-Biological Characterization of Torpedino Di Fondi® Tomato Fruits: A Comparison with San Marzano Cultivar at Two Ripeness Stages*. Antioxidants (2020), 9 (10) DOI: https://doi.org/10.3390/antiox9101027.

9 Sisto, F.; Carradori, S.; Guglielmi, P.; Traversi, C.B.; **Spano, M.**; Sobolev, A.P.; Secci, D.; Di Marcantonio, M.C.; Haloci, E.; Grande, R.; Mincione, G. *Synthesis and Biological Evaluation of Carvacrol-Based Derivatives as Dual Inhibitors of H. pylori Strains and AGS Cell Proliferation*. Pharmaceuticals (2020), 13 (11) DOI: https://doi.org/10.3390/ph13110405.

10 Di Matteo, G.; **Spano, M.**; Esposito, C.; Santarcangelo, C.; Baldi, A.; Daglia, M.; Mannina, L.; Ingallina, C.; Sobolev, A.P. *NMR Characterization of Ten Apple Cultivars from the Piedmont Region*. Foods (2021), 10 (2) DOI: https://doi.org/10.3390/foods10020289.

11 Sisto, F.; Carradori, S.; Guglielmi, P.; **Spano, M.**; Secci, D.; Granese, A.; Sobolev, A.P.; Grande, R.; Campestre, C.; Di Marcantonio, M.C.; Mincione, G. *Synthesis and Evaluation of Thymol-Based Synthetic Derivatives as Dual-Action Inhibitors against Different Strains of H. pylori and AGS Cell Line*. Molecules (2021), 26 (7) DOI: https://doi.org/10.3390/molecules26071829.

12 Spano, M.; Di Matteo, G.; Ingallina, C.; Botta, B.; Quaglio, D.; Ghirga, F.; Balducci, S.; Cammarone, S.; Campiglia, E.; Giusti, A.M.; Vinci, G.; Rapa, M.; Ciano, S.; Mannina, L.; Sobolev, A.P. *A Multimethodological Characterization of Cannabis sativa L. Inflorescences from Seven Dioecious Cultivars Grown in Italy: The Effect of Different Harvesting Stages*. Molecules (2021), 26 (10) DOI: https://doi.org/10.3390/molecules26102912

13 Rotondo, A.; La Torre, G.L.; Gervasi, T.; Di Matteo, G.; **Spano, M.**; Ingallina, C.; Salvo, A. *A Fast and Efficient Ultrasound-Assisted Extraction of Tocopherols in Cow Milk Followed by HPLC Determination*. Molecules (2021), 26 (15) DOI: https://doi.org/10.3390/molecules26154645

14 Spano, M.; Maccelli, A.; Di Matteo, G.; Ingallina, C.; Biava, M.; Crestoni, M.E.; Bardaud, J.-X.; Giusti, A.M.; Mariano, A.; D'Abusco, A.S.; Sobolev, A.P.; Lasalvia, A.; Fornarini, S.; Mannina, L. *Metabolomic Profiling of Fresh Goji (Lycium barbarum L.) Berries from Two Cultivars Grown in Central Italy: A Multi-Methodological Approach*. Molecules (2021), 26 (17) DOI: https://doi.org/10.3390/molecules26175412

15 Di Matteo, G.; Di Matteo, P.; Sambucci, M.; Tirillò, J.; Giusti, A.M.; Vinci, G.; Gobbi, L.; Prencipe, S.A.; Salvo, A.; Ingallina, C.; **Spano, M.**; Sobolev, A.P.; Proietti, N.; Di Tullio, V.; Russo, P.; Mannina, L.; Valente, M. *Commercial Bio-Packaging to Preserve the Quality and Extend the Shelf-Life of Vegetables: The Case-Study of Pumpkin Samples Studied by a Multimethodological Approach*. Foods (2021), 10 (10), DOI: https://doi.org/10.3390/foods10102440.

16 Corinti, D.; Chiavarino, B.; **Spano, M.**; Tintaru, A.; Fornarini, S.; Crestoni, M.E. *Molecular basis for the remarkably different gas-phase behavior of deprotonated thyroid hormones triiodothyronine (T3) and reverse triiodothyronine (rT3): a clue for their discrimination?* Analytical Chemistry (2021), 93 (44), DOI: https://doi.org/10.1021/acs.analchem.1c03892

17 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 (2022), 14, DOI: https://doi.org/10.3390/nu14030490