PERSONAL INFORMATION

Eduardo Maria Sommella



University of Salerno
Department of Pharmacy
Via Giovanni Paolo II, 132, Fisciano 84084 (SA)

[redacted]

[redacted] | *Nationality* Italian

Enterprise	University	EPR
☐ Management Level	☐ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
☐ Mid-Management Level	☒ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

2022 - present

Associate Professor in Medicinal Chemistry (SSD CHIM/08, L. 240/10)

University of Salerno

- Lecturer of the course in Chemical Pharmaceutical Analysis I
- Lecturer of the course in Advanced methodologies in Medicinal Chemistry
- Lecturer of the course in characterization and valorization of typical agrofood products of Campania region
- Lecturer of the course ARTIFICIAL INTELLIGENCE FOR OMICS DATA ANALYSIS
- Responsible of the Bio Open Lab Mass spectrometry facility

Business sector: Academia/Scientific research

05/2018 – 08/2018

Visiting scientist

Institute de Biologie Moleculaire des plant (IBMB, CNRS, Strasbourg, France)

- Development and application of FTMS methods in MALDI imaging and metabolomics

Business sector: Academia/Scientific research

2017 - 2018

Post-doctoral fellow

University of Salerno

- Development and application of LCMS methods in pharmaceutical analysis

Business sector: Academia/Scientific research

2016 - 2017

Post-doctoral fellow

University of Reggio Calabria, Academia

- Development and application of LCMS methods in food analysis

Business sector: Academia/Scientific research

2016 - 2017

Post-doctoral fellow

University of Salerno, Academia

- Development and application of LCMS methods in pharmaceutical analysis

Business sector: Academia/Scientific research

EDUCATION AND TRAINING

2010 - 2012 **PhD in Food Chemistry and Safety**
University of Messina

- Subject: Development of advanced analytical methods for complex matrices analysis
- Skill acquired: Expertise in chromatography and mass spectrometry methods for omics, pharmaceutical analysis and natural products characterization (tutor Prof.Luigi Mondello)

2003 - 2009 **Master Degree in Pharmaceutical Chemistry** (tutor Prof. Ettore Novellino)
University of Naples, "Federico ", Napoli (Italy)

- Heterocyclic synthesis and chemical purification

WORK ACTIVITIES

Awards

GISS award for the participation to the meeting "*Incontri di Scienza delle Separazioni-Il contributo della scienza delle separazioni alle problematiche alimentari e ambientali*" Messina, Italy, 28-29 November 2013

Rozing Travel Grant, for the participation to the international meeting HPLC 2017, 18-23 June 2017, Prague, Czech Republic

Editorial activity

Member of Editorial board of "*Separations*":
https://www.mdpi.com/journal/separations/editors
Guest Editor for "*Separations*" in the Special Issue "Chromatographic Analysis of Biological Samples"
https://www.mdpi.com/journal/separations/special_issues/Chrom_bio

Guest Editor for "*Molecules*" in the Special Issue "Separation and Purification of Peptides"
https://www.mdpi.com/journal/molecules/special_issues/separation_purification_peptides

Referee for the following international journals: Journal of Chromatography A, Analytica Chimica Acta, Journal of Separation Science, Food Research International, Food Control, Journal of Functional Foods, Journal of Essential oil research, Clinical and Experimental Pharmacology and Physiology, Journal of Pharmaceutical and Biomedical Analysis, ESC Heart Failure, Environmental Pollution, Electrophoresis, Natural Product Research, Food and Function.

Invited presentations

Dr. Sommella is author of numerous oral communications at national and international conferences including HPLC2019, NMMC2019, CHIMALI2016, NPCF2015

Grants

- Component of research team of project PON01_01499 "Hi-life – Health Products from the Industry of Foods" dal 01-02-2013 al 31-01-2015, Participant to reseatch activity of project POR Campania FESR 2013-2017 "SALUS PER LACTEM" CUP B67I12000110007 from 02-10-2017 to 01-10-2018
- Component of research team of project POR Campania FESR 2014-2020 Fase 2, Studio multicentrico aperto per determinare la sicurezza, tollerabilità ed efficacia della Larazotide acetato per l'uso urgente in pazienti anziani a rischio per la prevenzione di danno acuto polmonare (ALI) e la sindrome da distress respiratorio acuto (ARDS) associate a infezione da COVID-19 CUP G58D20000240002 from 18-05-2020 to 17-03-2021
- Component of research team of project B61G18000470007– CAMPANIA ONCOTERAPIE", POR FESR CAMPANIA 2014-2020
- Component of research team of project ARS01_00432 CUP: B26G18000700005 "PROCESSI GREEN PER L'ESTRAZIONE DI PRINCIPI ATTIVI E LA DEPURAZIONE DI MATRICI DI SCARTO E NON" (PON R&I 2014-2020 and PNR 2015-2020)

Personal skills and competences

- -Component of research team of project : PNC- “D3 4 HEALTH”. “DIGITAL DRIVEN DIAGNOSTICS, PROGNOSTICS AND THERAPEUTICS FOR SUSTAINABLE HEALTH CARE”.
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- Component of research team of project : CN00000041 - CENTRO NAZIONALE DI RICERCA "SVILUPPO DI TERAPIA GENICA E FARMACI CON TECNOLOGIA A RNA". Tematica PNRR M4C2 - Dalla ricerca all'impresa - 1.4: Potenziamento strutture di ricerca e creazione di "campioni nazionali" di R&S su alcune Key enabling technologies.
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- Component of research team of project : “I-Care.me – Cure innovative attraverso ambienti intelligenti” –CUP: B59C20000500005 MIUR Avviso per la presentazione di progetti di ricerca industriale e sviluppo sperimentale nelle 12 aree di specializzazione individuate dal PNR 2015-2020.
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- - Component of research team of project : “Applicazione delle tecnologie omiche per il contrasti al covid (ATOMIC)” MIUR Avviso pubblico per la presentazione di manifestazioni di interesse all’utilizzo della Piattaforma di Genomica di Area Science Park stessa per la realizzazione di progetti finalizzati alla previsione e al monitoraggio delle emergenze epidemiologiche nell’ambito del sistema ARGO”

The fields of interest of Dr. Sommella are focused on the employment of advanced analytical methods mainly based on mass spectrometry (MS) for metabolomics, lipidomics and proteomics, pharmacokinetics and nutraceutics. Specifically, within the project objectives Dr. Sommella expertise falls into the application, of advanced MS-based approaches (such as UHPLC-HRMS, 2DLC-MS and MALDI-MSI) for the analysis of biofluids, tissues, and cell lysate to identify and quantify dysregulated metabolites, lipids and proteins in disease models. This has been applied for instance to elucidate the role of sphingolipids in hypertension and glutamine in cancer models, as well as to evaluate pharmacokinetics and pharmacodynamics of novel drugs by multi-omics approaches and statistics.
Additionally, his interests involve the characterization of complex natural sources, nutraceuticals, and by-products of food industry.

Mother Tongue: Italian, English C1

ADDITIONAL INFORMATION

Publications

total number of publications in peer-review journals: **78**
total number of citations: **1327**
H index (Scopus): **23**
Top 10 scientific publications:

1. Carbone D, Vestuto V, Ferraro MR, Ciaglia T, Pecoraro C, **Sommella** E, Cascioferro S, Salviati E, Novi S, Tecce MF, Amodio G, Iraci N, Cirrincione G, Campiglia P, Diana P, Bertamino A, Parrino B, Ostacolo C. Metabolomics-assisted discovery of a new anticancer GLS-1 inhibitor chemotype from a nortopsentin-inspired library: From phenotype screening to target identification. Eur J Med Chem. 2022 Apr 15;234:114233. doi: 10.1016/j.ejmech.2022.114233. Epub 2022 Mar 6. PMID: 35286926.

2. Di Pietro P, Carrizzo A, **Sommella** E, Oliveti M, Iacoviello L, Di Castelnuovo A, Acernese F, Damato A, De Lucia M, Merciai F, Iesu P, Venturini E, Izzo R, Trimarco V, Ciccarelli M, Giugliano G, Carnevale R, Cammisotto V, Migliarino S, Virtuoso N, Strianese A, Izzo V, Campiglia P, Ciaglia E, Levkau B, Puca AA, Vecchione C. Targeting the ASMase/S1P pathway protects from sortilin-evoked vascular damage in hypertension. J Clin Invest. 2022 Feb 1;132(3):e146343. doi: 10.1172/JCI146343. PMID: 35104805; PMCID: PMC8803332.

3. Merciai F., Musella S., **Sommella E.,** Bertamino A., D’Ursi A., Campiglia P. Development and application of a fast ultra-high performance liquid chromatography-trapped ion mobility mass

spectrometry method for untargeted lipidomics Journal of Chromatography A. 1673, 2022, 463124. https://www.sciencedirect.com/science/article/pii/S002196732200317X

4. **Sommella** E, Carrizzo A, Merciai F, Di Sarno V, Carbone D, De Lucia M, Musella S, Vecchione C, Campiglia P. Analysis of the metabolic switch induced by the spirulina peptide SP6 in high fat diet ApoE-/- mice model: A direct infusion FT-ICR-MS based approach. J Pharm Biomed Anal. 2021 Feb 20;195:113865. doi: 10.1016/j.jpba.2020.113865

5. Carrizzo A, Conte GM, **Sommella** E, Damato A, Ambrosio M, Sala M, Scala MC, Aquino RP, De Lucia M, Madonna M, Sansone F, Ostacolo C, Capunzo M, Migliarino S, Sciarretta S, Frati G, Campiglia P, Vecchione C. Novel Potent Decameric Peptide of Spirulina platensis Reduces Blood Pressure Levels Through a PI3K/AKT/eNOS-Dependent Mechanism. Hypertension. 2019 Feb;73(2):449-457. doi: 10.1161/HYPERTENSIONAHA.118.11801.

6. Meng D, **Sommella** E, Salviati E, Campiglia P, Ganguli K, Djebali K, Zhu W, Walker WA. Indole-3-lactic acid, a metabolite of tryptophan, secreted by Bifidobacterium longum subspecies infantis is anti-inflammatory in the immature intestine. Pediatr Res. 2020 Aug;88(2):209-217. doi: 10.1038/s41390-019-0740-x.

7. **Sommella** E, Pepe G, Ventre G, Pagano F, Manfra M, Pierri G, Ismail O, Ciogli A, Campiglia P. Evaluation of two sub-2 μm stationary phases, core-shell and totally porous monodisperse, in the second dimension of on-line comprehensive two dimensional liquid chromatography, a case study: separation of milk peptides after expiration date. J Chromatogr A. 2015 Jan 2;1375:54-61. doi: 10.1016/j.chroma.2014.11.072.

8. **Sommella** E, Ismail OH, Pagano F, Pepe G, Ostacolo C, Mazzoccanti G, Russo M, Novellino E, Gasparrini F, Campiglia P. Development of an improved online comprehensive hydrophilic interaction chromatography × reversed-phase ultra-high-pressure liquid chromatography platform for complex multiclass polyphenolic sample analysis. J Sep Sci. 2017 May;40(10):2188-2197. doi: 10.1002/jssc.201700134. Epub 2017 Apr 19.

9. Ciccarelli M, Merciai F, Carrizzo, A, **Sommella E,** Di Pietro P, Caponigro V., Salviati E. Musella S, Di Sarno V, Rusciano M, Toni AL, Iesu P, Izzo C, Schettino G, Conti V, Venturini E, Vitale C, Scarpati G, Bonadies D, Rispoli A, Polverino B, Poto S, Pagliano P, Piazza O, Licastro D, Vecchione C, Campiglia PUntargeted Lipidomics reveals specific lipid profiles in COVID-19 patients with different severity from Campania region (Italy). Journal of Pharmaceutical and Biomedical Analysis. 217, 2022, 114827, https://www.sciencedirect.com/science/article/pii/S0731708522002485

10. Donato P, Cacciola F, **Sommella** E, Fanali C, Dugo L, Dachà M, Campiglia P, Novellino E, Dugo P, Mondello L. Online comprehensive RPLC × RPLC with mass spectrometry detection for the analysis of proteome samples. Anal Chem. 2011 Apr 1;83(7):2485-91. doi: 10.1021/ac102656b. Epub 2011 Mar 8. PMID: 21384902