Maria Concetta Volpe

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ORCID: https://orcid.org/0000-0001-5849-3264

Total number of publications in peer-review journals: **16**
Total number of citations: 1300 (Scopus)
H-index: 11 (Scopus)
Field of interest: Pulmonary diseases and lung cancer

WORK EXPERIENCE

01/06/2024-ongoing

Scientist

Ri.MED Foundation, Via Bandiera 11, Palermo, Italy

Research activities on COPD, Idiopathic Pulmonary Fibrosis; Design and perform or supervise molecular biology and in vitro experiments; Project designer and co-supervisor of master and PhD students.
Pulmonary disease and lung cancer

01/11/2021-31/05/2024

Post-Doctoral

International Centre for Genetic Engineering and Biotechnology/ Località Padriciano 99, TS, Italy

Research activities on COVID and Idiopathic Pulmonary Fibrosis; Design and perform or supervise molecular biology and in vivo experiments; Project designer and co-supervisor of master and PhD students
Pulmonary disease

01/11/2018- 31/10/2021

PhD student

University of Trieste, Molecular BioMedicine PhD program/ Piazzale Europa 1, TS, Italy

Research activities on Idiopathic Pulmonary Fibrosis; Supervisor of master students
Pulmonary disease

01/08/2019-10/09/2019

Visiting Scientist

University of Pennsylvania, Pulmonology, Allergy and Critical Care Division/ Edward J stemmler Hall-Suite 216, 3450 Hamilton Walk, Philadelphia, PA 19104

Isolation and characterization of primary Alveolar type II cells from both mouse and human samples.
Pulmonary disease

01/08/2019-10/09/2019

Research Fellow

Fondazione Italiana Fegato/ SS 14 Km 163.5, Building Q, Area Science Park, TS, Italy

To study splicing factors, mis-folding, aggregation and low tissue levels during aging in degenerative diseases. Preparation of Precision Cut Slices.
Degenerative disease

01/03/2017-31/01/2018

Master student

International Centre for Genetic Engineering and Biotechnology/ Località Padriciano 99, TS, Italy

Study of TDP-43 role in ALS Pathogenesis using a cellular model based on its prion-like domain. Isolation and characterization of Exosomes.

EDUCATION AND TRAINING

01/11/2018- 04/03/2022

PhD

University of Trieste, Molecular BioMedicine PhD program/ Piazzale Europa

Pulmonary disease

01/09/2015-15/12/2017

Master Degree in Functional Genomics (110/110)

University of Trieste, Life Science Department

Genomics

01/09/2011-14/12/2014

Bachelor Degree in Biological Sciences (101/110)

University of Messina

Biology

01/09/2006-05/07/2011

High school diploma

Liceo Classico Leonardo Sciascia, Sant'Agata di Militello (ME)

PERSONAL SKILLS AND COMPETENCES

Mother languages: Italian

Other languages

	COMPREHENSION		SPEAKING		WRITING
	Listening	Reading	Interation	Oral Speaking	
Inglese	B2	B2	B2	B2	B2
French	B2	B2	B2	B2	B2

Scientific skills and competences

Expert in all techniques regarding molecular biology, high troughput screening, and in vivo experiments with mice animal models. Expert in the purification of primary cells: epithelial, endothelial and mesenchymal cells from human or murine tissues.

Instrument: I have good command of the most widely used HTS imagers: Operetta (PKI) and Confocal Operetta CLS (PKI).
Software: I have good command of the following HTS-related softwares:Harmony (PKI), Columbus (PKI), Ingenuity Pathway Analysis (IPA, Qiagen)

Relevant Roles and Competences

Supervision of master and PhD students. Expert in coordination of scientific group members, and lab manager. Inventor of Patent. Expertise in collaboration with pharmaceutical industries. Owner of 2 patents.

Relevant Publications

- **Volpe MC**, Ciucci G, Zandomenego G, Vuerich R, Ring NAR, Vodret S, Salton F, Marchesan P, Braga L, Marcuzzo T, Bussani R, Colliva A, Piazza S, Confalonieri M, Zacchigna S. Flt1 produced by lung endothelial cells impairs ATII cell transdifferentiation and repair in pulmonary fibrosis. Cell Death Dis. 2023 Jul
- **Volpe MC**, Zandomenego Giulia, Raffaella Klima, Marco Confalonieri, Luca Braga. microRNA-Based Approaches Targeting Alveolar Epithelial Cells as Pro-Regenerative Treatment in Idiopathic Pulmonary Fibrosis. Manuscript in preparation.
- Ring NAR*, **Volpe MC***, Stepišnik T, Mamolo MG, Panov P, Kocev D, Vodret S, Fortuna S, Calabretti A, Rehman M, Colliva A, Marchesan P, Camparini L, Marcuzzo T, Bussani R, Scarabellotto S, Confalonieri M, Pham TX, Ligresti G, Caporarello N, Loffredo FS, Zampieri D,

Džeroski S, Zacchigna S. Wet-dry-wet drug screen leads to the synthesis of TS1, a novel compound reversing lung fibrosis through inhibition of myofibroblast differentiation. Cell Death Dis. 2021 Dec

- Saxena S, **Volpe MC**, Agostinis C, Vodret S, Ring NAR, Colliva A, Vuerich R, Braga L, Cook-Calvete A, Romano F, Zito G, Lorenzo GD, Ura B, Ricci G, Pinamonti M, Bulla R, Zacchigna S. Anti-miRNA therapeutics for uterine fibroids. Biomed Pharmacother. 2025 Apr;185:117946. doi: 10.1016/j.biopha.2025.117946. Epub 2025 Feb 28. PMID: 40022993.
- Rocca A, Braga L, **Volpe MC**, Maiocchi S, Generali D. The Predictive and Prognostic Role of RAS-RAF-MEK-ERK Pathway Alterations in Breast Cancer: Revision of the Literature and Comparison with the Analysis of Cancer Genomic Datasets. Cancers (Basel). 2022 Oct 28;14(21):5306. doi: 10.3390/cancers14215306. PMID: 36358725; PMCID: PMC9653766.
- Bussani R, Schneider E, Zentilin L, Collesi C, Ali H, Braga L, **Volpe MC**, Colliva A, Zanconati F, Berlot G, Silvestri F, Zacchigna S, Giacca M. Persistence of viral RNA, pneumocyte syncytia and thrombosis are hallmarks of advanced COVID-19 pathology. EBioMedicine. 2020 Nov.
- Moimas S, Salton F, Kosmider B, Ring N, **Volpe MC**, Bahmed K, Braga L, Rehman M, Vodret S, Graziani ML, Wolfson MR, Marchetti N, Rogers TJ, Giacca M, Criner GJ, Zacchigna S, Confalonieri M. miR-200 family members reduce senescence and restore idiopathic pulmonary fibrosis type II alveolar epithelial cell transdifferentiation. ERJ Open Res. 2019 Dec.
- Volf N, Vuerich R, Colliva A, **Volpe MC**, Marengon M, Zentilin L, Giacca M, Ring NAR, Vodret S, Braga L, Zacchigna S. Endothelial-to-mesenchymal transition enhances permissiveness to AAV vectors in cardiac endothelial cells. Mol Ther. 2024 Nov 6;32(11):3808-3814. doi: 10.1016/j.ymthe.2024.08.014. Epub 2024 Aug 22. PMID: 39175195; PMCID: PMC11573677.
- Baratella E, Bussani R, Zanconati F, Marrocchio C, Fabiola G, Braga L, Maiocchi S, Berlot G, **Volpe MC**, Moro E, Confalonieri P, Cova MA, Confalonieri M, Salton F, Ruaro B. Radiological-pathological signatures of patients with COVID-19-related pneumomediastinum: is there a role for the Sonic hedgehog and Wnt5a pathways? ERJ Open Res. 2021 Aug.
- Ruaro B, Salton F, Braga L, Wade B, Confalonieri P, **Volpe MC**, Baratella E, Maiocchi S, Confalonieri M. The History and Mystery of Alveolar Epithelial Type II Cells: Focus on Their Physiologic and Pathologic Role in Lung. Int J Mol Sci. 2021 Mar.
- Salton F, **Volpe MC**, Confalonieri M. Epithelial–Mesenchymal Transition in the Pathogenesis of Idiopathic Pulmonary Fibrosis. Medicina (Kaunas). 2019 Mar

Personal data

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

Place and date
Palermo, 10/06/2026

Firma