

# Dr. Stefano Tacconi

## Education

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### Ph.D. school (Doctor Europaeus)

**Nov 2017 - Dec 2021**

Di.S.Te.B.A., University of Salento, Lecce, Italy

Laboratory of Comparative Anatomy and Cytology of the Department of Biological and Environmental Sciences and Technologies (Di.S.Te.B.A.) of the University of Salento. PhD Project title: Macrophages, extracellular vesicles and immune function: a new crosstalk in metabolic diseases and related alterations.

During the Ph.D. course, a 12-month research period abroad was carried out at:

- CarMeN Laboratory, Université Lyon1 (Lyon, France);
- Laboratory Experimental Clinical Chemistry, Academisch Medisch Centrum (AMC), University of Amsterdam (Amsterdam, The Netherlands).

### Master's degree (110/110 with laude)

**AA 2013 - 2015**

University of Salento, Lecce, Italy

Master's Degree in Biology - "Human Nutrition" curriculum. University of Salento, Lecce (LE, 73100)

He graduated on April 27 2016, with 110 cum laude, presenting an experimental thesis entitled "Metabolic alterations and biochemical- molecular characterization of leukocytes: a new approach to the diagnosis of diabetes and dyslipidemia ". The master's degree internship was shared for 12- months between the Clinical Pathology laboratories of the U.O. "Vito Fazzi " of Lecce and the Laboratory Biochemistry and Molecular Biology of the University of Salento.

### Bachelor's degree in biotechnology

**AA 2009 - 2013**

University of Salento, Lecce, Italy

General subjects: English, Mathematics, Statistics, Computer Science.

Specific subjects: General and inorganic chemistry, Organic chemistry, Physical chemistry, Analytical chemistry, Physics applied to biotechnology, Biochemistry, Molecular biology, Cytology, Histology, Embryology, Human anatomy, Human biophysics and physiology, Cellular and applied biology, Plant cell biology, Plant physiology, Chemistry of materials, Plant biotechnology, General microbiology, Bioethics and patents, Bioinformatics. In December 2013, she supported the graduation exam with an experimental thesis in Plant Cell biology entitled "Evaluation of the bioavailability of carotenoids from pumpkin pulp (*C. moschata* Duch.) by in vitro digestion".

### High school diploma (industrial technician specialized in food technologies)

**2003-2008**

E. Majorana Industrial Technical Institute, Brindisi, Italy

General subjects: Italian, English, Mathematics, History, Geography, Computer Science, Physical Education and Religion

Specific subjects: Analytical chemistry, organic chemistry, physical chemistry, industrial chemical plants, food chemistry and general and food microbiology.

### Training courses

Ultramicrotomy technical-practical course at Unitech NOLIMITS (University of Milan), January 2022, Milan, Italy

## Employments and appointments

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### Scientific Researcher (equipollent to Italian RTDa)

**Feb 2023 – Feb 2026**

Laboratory in cardiovascular diseases, metabolism, diabetology and nutrition (CarMeN)–INRAE– University of Lyon

Title of the project: "MEXID" (Muscle release Extracellular vesicles in the context of Insulin-resistance associated with Diabetes).

Aim of the project: Role of extracellular vesicles in the cross-talk between macrophages and skeletal muscle during metabolic alterations.

### Post-Doc Researcher

**Oct 2022 – Jan 2023**

Department of Biology and Biotechnology "C. Darwin", Comparative cell biology and imaging laboratory (CCBIL) Sapienza University of Rome, Rome, Italy

Title of the project: Effects mediated by new inhibitors of the CSN pathways in human cancer stem cells of glioblastoma and in normal astrocytes".

Role in the project: Application of High-resolution microscopy approaches for cell ultrastructure analysis

### Post-Doc Research

**Apr 2022 - Aug 2022**

Nanoshare s.r.l. company, Rome, Italy

Title of the project: NEMESI (Nanotecnologie chiMiche green per la protEzione Sostenibile delle piante)

Role in the project: High- resolution microscopy and analysis of chitosan-based nanoformulations and plant samples.

### Post-Doc Research

**Feb 2021 - Feb 2022**

In agreement between Department of Biological and Environmental Sciences and Technologies, University of Salento, Lecce, Italy and Department of Biology and Biotechnology "Charles Darwin", Sapienza University of Rome, Italy.

Title of the project: "Oli.Di.X.I.T " Olive growing and defense against Xylella fastidiosa and vector insects in Italy",

Role in the project: High-resolution microscopy and X- ray tomography analysis of olive plant samples treated with nano-encapsulated pesticides for the treatment of Xylella fastidiosa.

### Coordinated and continuous collaboration contract (CoCoCo, collaborazione coordinata e continuativa)

**Apr 2017 - Sep 2017**

Department of Biological and Environmental Sciences and Technologies, University of Salento, Lecce, Italy

Role in the project: Analysis of mitochondrial function in in vitro models of hepatic steatosis by biochemical and cell biology approaches

## Publications

Completed list of publications from 2020 (entire academic seniority)

- Tacconi S., Vari F, Sbarigia C, Vardanyan D, Longo S, Mura F, Angilè F, Jalabart A, Vergara D, Fanizzi FP, Rossi M, Errazuriz-Cerda E, Cassin C, Nieuwland R, Giudetti AM, Rome S, Dini L. Extracellular vesicles derived from M1 macrophages in hyperglucose environment polarize recipient macrophages into M2 and alter skeletal muscle homeostasis. Available at <https://doi.org/10.1101/2023.10.03.560690>. Under revision in Cell Commun. Signal. 2023. (IF 7.54); Cell Biology Q1/ Molecular Biology Q1/ Biochemistry Q1.
- Rome S, Tacconi S. High-Fat Diet: you are what you eat...and your extracellular vesicles too! Available at DOI: 10.22541/au.169644635.54447889/v1. Final step of revision in J. Extracell. Vesicles. 2023. (IF 16); Cell Biology Q1/ Histology Q1
- Baldassarre F, Fiorati A, Riva L, Tacconi S., Nobile C, Vergaro V, Suranna G P, Melone L, Mele A, Dini L, Punta C, Ciccarella G. Stable microsponges by Spray Drying of TEMPO-oxidized cellulose nanofibers: synthesis and characterization for controlled drug release. Available at SSRN: <https://ssrn.com/abstract=4481718> or <http://dx.doi.org/10.2139/ssrn.4481718>. Under revision in J. Drug Deliv. Sci. Technol. 2023. (IF 5.06); Pharmaceutical Science Q1.
- Sbarigia C, Dinarelli S, Mura F, Buccini L, Vari F, Passeri D, Rossi M, Tacconi S, Dini L. Wild-Type and SOD1-G93A SH-SY5Y under Oxidative Stress: EVs Characterization and Topographical Distribution of Budding Vesicles. Applied Nano. 2023; 4(1):45-60. <https://doi.org/10.3390/applnano4010004>.
- Tacconi S\*, Longo S, Guerra F, Molteni C, Friuli M, Romano A, Gaetani S, Paradiso V M, Difonzo G, Caponio F, Lofrumento D, Vergara D, Bucci C, Dini L, Giudetti A M. An aqueous olive leaf extract (OLE) ameliorates parameters of oxidative stress associated with lipid accumulation and induces lipophagy in human hepatic cells. Food Funct. 2023 Jun 19;14(12):5805-5819. <https://doi.org/10.1039/d3fo00817g>. (IF 6.1); Medicine (miscellaneous) Q1 /Food Scienze Q1
- Sbarigia C\*, Tacconi S\*, Mura F, Rossi M, Dinarelli S, Dini L. High-resolution atomic force microscopy as a tool for topographical mapping of surface budding. Front Cell Dev Biol. 2022 Oct 12;10:975919. <https://doi.org/10.3389/fcell.2022.975919>. (IF 5.5); Developmental biology Q1 / Cell biology Q2.
- Sbarigia C, Vardanyan D, Buccini L, Tacconi S, Dini L. SARS-CoV-2 and extracellular vesicles: An intricate interplay in pathogenesis, diagnosis and treatment. Front. Nanotechnol. 2022 Aug 31. <https://doi.org/10.3389/fnano.2022.987034>. (IF 3.5); Biomedical engineering Q2.
- Tacconi S\*, Augello S, Persano F, Sbarigia C, Carata E, Leporatti S, Fidaleo M, Dini L. Amino-functionalized mesoporous silica nanoparticles (NH<sub>2</sub>-MSiNPs) impair the embryonic development of the sea urchin *Paracentrotus lividus*. Environ Toxicol Pharmacol. 2022 Oct. <https://doi.org/10.1016/j.etap.2022.103956>. (IF 4.3); Health, Toxicology and Mutagenesis Q1 / Medicine (miscellaneous) Q1 / Pharmacology Q1 / Toxicology Q1.
- Panzarini E, Leporatti S, Tenuzzo BA, Quarta A, Hanafy NAN, Giannelli G, Moliterni C, Vardanyan D, Sbarigia C, Fidaleo M, Tacconi S, Dini L. Therapeutic Effect of Polymeric Nanomicelles Formulation of LY2157299-Galunisertib on CCl<sub>4</sub>-Induced Liver Fibrosis in Rats. J Pers Med. 2022 Nov 1;12(11):1812. <https://doi.org/10.3390/jpm12111812>. (IF 3.4); Medicine (miscellaneous) Q2.
- Giudetti AM, Vergara D, Longo S, Friuli M, Eramo B, Tacconi S, Fidaleo M, Dini L, Romano A, Gaetani S. Oleoylethanolamide Reduces Hepatic Oxidative Stress and Endoplasmic Reticulum Stress in High-Fat Diet-Fed Rats. Antioxidants (Basel). 2021 Aug 14;10(8):1289. <https://doi.org/10.3390/antiox10081289>. (IF 7.67); Biochemistry Q2/ Cell Biology Q2/ Clinical biochemistry Q1/ Molecular biology Q2/ Physiology Q2.
- Simeone P, Tacconi S, Longo S, Lanuti P, Bravaccini S, Pirini F, Ravaioli S, Dini L, Giudetti AM. Expanding Roles of De Novo Lipogenesis in Breast Cancer. Int J Environ Res Public Health. 2021 Mar 30;18(7):3575. <https://doi.org/10.3390/ijerph18073575>. (IF 3.39); Health, Toxicology and Mutagenesis Q2 / Pollution Q2 / Public Health, Environmental and Occupational Health Q2.
- Fidaleo M, Tacconi S, Sbarigia C, Passeri D, Rossi M, Tata AM, Dini L. Current Nanocarrier Strategies Improve Vitamin B12 Pharmacokinetics, Ameliorate Patients' Lives, and Reduce Costs. Nanomaterials (Basel). 2021 Mar 16;11(3):743. <https://doi.org/10.3390/nano11030743>. (IF 5.71); Chemical Engineering (miscellaneous) Q1/ Materials Science (miscellaneous) Q1.
- Mariano S, Tacconi S, Fidaleo M, Rossi M, Dini L. Micro and Nanoplastics Identification: Classic Methods and Innovative Detection Techniques. Front Toxicol. 2021 Feb 26;3:636640. <https://doi.org/10.3389/ftox.2021.636640>. (IF 1.6).
- Panzarini E, Mariano S, Tacconi S, Carata E, Tata AM, Dini L. Novel Therapeutic Delivery of Nanocurcumin in Central Nervous System Related Disorders. Nanomaterials (Basel). 2020 Dec 22;11(1):2. <https://dx.doi.org/10.3390/nano11010002>. (IF 5.07); Chemical Engineering (miscellaneous) Q1/ Materials Science (miscellaneous) Q1.

- Panzarini E, Tacconi S, Carata E, Mariano S, Tata AM, Dini L. Molecular Characterization of Temozolomide-Treated and Non Temozolomide-Treated Glioblastoma Cells Released Extracellular Vesicles and Their Role in the Macrophage Response. *International Journal of Molecular Sciences*. 2020; 21(21):8353. <https://doi.org/10.3390/ijms21218353>. (IF 5,92); Catalysis Q2/ Inorganic chemistry Q1/ Medicine (miscellaneous) Q1/ Molecular Biology Q2/ Organic chemistry Q1/ Physical and Theoretical Chemistry Q1/ Spectroscopy Q1.
- Dini L, Tacconi S, Carata E, Tata AM, Vergallo C, Panzarini E. Microvesicles and exosomes in metabolic diseases and inflammation. *Cytokine Growth Factor Rev.* 2020 Feb;51:27-39. <https://doi.org/10.1016/j.cytogfr.2019.12.008>. (IF 7,6); Biochemistry, Genetics and Molecular Biology (miscellaneous) Q1/ Endocrinology, Diabetes and Metabolism Q1/ Immunology Q1/ Immunology and allergy Q1

\*first author

## Under revision

- **Tacconi S.**, Giudetti AM, Meugnier E, Longo S, Angilé F, Fanizzi PF, Panzarini E, Mura F, Rossi M, Fidaleo M, Jalabert A, Gillet B, Hughes S, Nieuwland R, Rome S, Dini L. Insulin-resistant M2-CD163 + macrophages release extracellular vesicles affecting lipid metabolism and extracellular matrix gene expression in muscle cells. *Diabetologia*. 2023. (IF 8.2); Endocrinology, Diabetes and Metabolism Q1.
- Reggente M, Roullier C, Mouhib M, Brandl P, **Tacconi S.**, Mura F, Dini L, Labarile R, Trotta M, Fischer F, Boghossian A A. Polydopamine-coated photoautotrophic bacterium for improving extracellular electron transfer in living photovoltaics. *Nano Res.* 2023. (IF 10.26); Nanoscience and Nanotechnology Q1.

## Under submission

- Buccini L., Proietti A., La Penna G., Mancini C., Mura F., **Tacconi S.**, Dini L., Rossi M., Passeri D. Raman and Tip-Enhanced Raman spectroscopy characterization of milk-derived extracellular vesicles: Toward nanoscale single vesicle analysis. Submitted to *Small*. (IF 13.3); Biotechnology Q1/ Biomaterials Q1.
- **Tacconi S.**, Buccini L, Vari F, Sennato S, Dinarelli S, Uccelletti D, Kuanysh S, Vardanyan D, Zuccotti M, Dini L. Bovine Milk-derived extracellular vesicles as new nanodrug delivery system for bioactive compounds. Submitted to *Pharmaceutics*. (IF 6.52); Pharmaceutical Science Q1.
- Manganelli V., Dini L., **Tacconi S.**, Dinarelli S., Capozzi A., Riitano G., Recalchi S., Caglar T. R., Misasi R., Sorice M., Garofalo T. Autophagy promotes enrichment of raft components within extracellular vesicles secreted by human 2FTGH cells. Submitted to *Cell Mol Life Science* (IF 9.2); Cell Biology Q1/Cellular and Molecular Neuroscience Q1/Molecular Biology Q1.
- **S. Tacconi**, F. Vari, D. Vardanyan , L. Valli, G. Giancane, L. Dini Microplastics from FFP2 masks affect paracentrotus lividus development, Submitted to *Chemosphere* (IF 8.94); Health, Toxicology and Mutagenesis Q1.
- **S. Tacconi**, V.Cameli, S.Augello, Emili D.Uccelletti, L. Dini Ozonated olive oil: an environmentally sustainable and biocompatible antifungal agent. Submitted to *Chemosphere* (IF 8.94); Health, Toxicology and Mutagenesis Q1.
- Sbarigia C§, **Tacconi S.**§ (§co-first authors), Rome S\*, Dini L\* (\*co-corresponding authors). New perspectives of the “dying back” hypothesis: the role of extracellular vesicles in Amyotrophic Lateral Sclerosis. Submitted to *Frontiers in Cellular Neuroscience*, Research Topic: "Paradigm shifts and innovation in cellular neuroscience" (IF 6.1); Cellular and Molecular Neuroscience Q1
- Vardanyan D§, **Tacconi S.** § (§co-first authors), Dinarelli S, Cufaro MC, Efimova I, Girasole M, Longo G,Del Boccio P, Krysko DV\*, Dini L\*(\*co-corresponding authors). Temozolomide-induced changes in glioblastoma-derived extracellular vesicles: from morphology to proteomic profile. Submitted to *Cancers* (IF 5.2); Oncology Q1/ Cancer research Q2.

## Book chapters

- Panzarini E, Carata E, Mariano S, Tenuzzo BA, **Tacconi S.**, Fidaleo M, Dini L. Chapter 2: “Plant and human health: the new era of biobased nanoscale systems”. In *Micro and NanoTechnologies, Nanotechnology-Based Sustainable Alternatives for the Management of Plant Diseases*, Elsevier, 2022, Pages 301- 322.

## Proceedings

- Proceedings of the ISEV2023 meeting (International Society of Extracellular vesicles)- May 2023; Journal of Extracellular vesicles, 12: e12329. <https://doi.org/10.1002/jev2.12329>. Presented work:
  - **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier F. Angilé, F.P. Fanizzi, A. Jalabart, R. Nieuwland, S. Rome, L. Dini. Macrophage-derived extracellular vesicles affect skeletal muscle homeostasis under lipoglucotoxic stress associated with high-fat diet.
  - C. Sbarigia, **S. Tacconi**, S. Dinarelli, S. Scaricamazza, C. Valle, S. Rome, L. Dini. Extracellular vesicles derived from plasma and skeletal muscle of SOD1-G93A mice models of Amyotrophic Lateral Sclerosis alter the phenotype and redox balance of recipient motoneuron-like cells.
- Proceedings of the ISEV2022 meeting (International Society of Extracellular vesicles)- May 2023; Journal of Extracellular vesicles, 11: e12252. <https://doi.org/10.1002/jev2.12252>. Presented work:
  - **S. Tacconi**, A. M. Giudetti, E. Meugnier, S. Longo, F. Angilé, F. P. Fanizzi, E. Panzarini, F. Mura, M. Rossi, M. Fidaleo, A. Jalabert, B. Gillet, S. Hughes, R. Nieuwland, S. Rome, L. Dini. Insulin-resistant M2-CD163+ macrophages release extracellular vesicles affecting lipid metabolism and extracellular matrix gene expression in muscle cells.
  - D. Vardanyan, **S. Tacconi**, S. Dinarelli, M.C. Cufaro, E. Panzarini, P. Del Boccio, L. Dini. Can Extracellular Vesicles derived from different temozolomide-treated glioblastoma multiforme cell lines be exploited as liquid biopsy?.
  - C. Sbarigia, S. Tacconi, F. Mura, M. Rossi, L. Dini, S. Dinarelli. High-resolution Atomic Force Microscopy as a tool for topographical mapping of surface budding.
- Proceedings of the 68th Congress of the Italian Embryological Group-Italian Society of Development and Cell Biology (GEI-SIBSC) - Oliveri, 5-8 June 2023; European journal of histochemistry, ISSN 1121-760X volume 67/ supplement 3 2023; <https://doi.org/10.4081/ejh.2022.3435>. Presented work:
  - **S. Tacconi**, L. Buccini, S. Sennato, S. Dinarelli, M. Zuccotti, L. Dini. Bovine milk extracellular vesicles: an oral drug delivery system for bioactive compounds.
  - **S. Tacconi**, S. Longo, C. Moliterni, V.M. Paradiso, G. Difonzo, F. Caponio, D. Vergara, L. Dini, A.M. Giudetti. Oxidative stress and lipid accumulation associated with an in vitro NAFLD model were reduced by olive leaf extract.
  - F. Vari\*, D. Vardanyan, L. Valli, G. Giancane, **S. Tacconi\***, L. Dini. MICROPLASTICS FROM FFP2 MASKS AFFECT PARACENTROTUS LIVIDUS DEVELOPMENT.
  - D. Vardanyan, I. Efimova, R. Demuyneck, **S. Tacconi**, D.V. Krysko, L. Dini. GLIOBLASTOMA-DERIVED EXTRACELLULAR VESICLES INDUCED MATURATION OF DENDRITIC CELLS: A PROMISING APPROACH FOR IMMUNOTHERAPY.
- Proceedings of the 67th Congress of the GEI-Italian Society of Development and Cell Biology (GEI-SIBSC) - Gargnano, 5-7 June 2022; European journal of histochemistry; ISSN 1121-760X volume 66/ supplement 1 2022. <https://doi.org/10.4081/ejh.2022.3435>. Presented work:
  - **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier, S. Longo, F. Angilé, F.P. Fanizzi, E. Panzarini, F. Mura, M. Rossi, M. Fidaleo, A. Jalabert, B. Gillet, S. Hughes, R. Nieuwland, S. Rome, L. Dini. INSULIN-RESISTANT M2-CD163+ MACROPHAGES RELEASE EXTRACELLULAR VESICLES AFFECTING LIPID METABOLISM AND EXTRACELLULAR MATRIX GENE EXPRESSION IN MUSCLE CELLS.
  - C. Sbarigia, D. Vardanyan, **S. Tacconi**, F. Mura, M. Rossi, L. Dini, S. Dinarelli. ATOMIC FORCE MICROSCOPY: A NEW EXPERIMENTAL APPROACH FOR TOPOGRAPHICAL MAPPING OF SURFACE BUDDING.
- Proceedings of THE INTERNATIONAL LIVER CONGRESS- London, 22–26 June 2022; Journal of Hepatology; ISSN 0168-8278. Presented work:
  - Panzarini E, Leporatti S, Tenuzzo BA, Quarta A, Hanafy NAN, Giannelli G, Moliterni C, Vardanyan D, Sbarigia C, **Tacconi S**, Fidaleo M, Dini L. Polymeric nanomicelles formulation of LY2157299-Galunisertib improves therapeutic outcome by greater reducing fibrosis and ameliorating fatty degeneration in a CCL4-induced hepatic-fibrosis rat-model.



- Proceedings of the XV European Meeting on Glial Cells in Health and Disease – Marseille (Online), July 2021; GLIA (Wiley); Poster Abstracts. Glia, 69: E118-E611. <https://doi.org/10.1002/glia.24036>. Presented work:
  - M.S.S. Intriago, C. Guerriero, **S. Tacconi**, A.M. Giudetti, C. Dallanocce, E. Pick, T. Rinaldi, L. Dini, A. M. Tata. Ubiquitin-proteasome system and mitochondrial respiration alterations and oxidative stress induction in human glioblastoma cells: role of the M2 muscarinic receptors.
- Proceedings of the SIB 2017-59th CONGRESS (Italian Society of Biochemistry and Molecular Biology) – Caserta, Italy, 2017, EdiSES srl, page 242. <https://hdl.handle.net/11587/441799>. Presented work:
  - M. Testini, **S. Tacconi**, G.V. Gnoni, L. Sicuella, F. Damiano. Human acetyl-CoA carboxylase 1 mRNA translation is enhanced in HepG2 cells under endoplasmic reticulum stress, serum deprivation or hypoxia”.
- Proceedings of the SIB 2017-59th CONGRESS (Italian Society of Biochemistry and Molecular Biology) – Caserta, Italy, 2017, EdiSES srl, page 265. <https://hdl.handle.net/11587/441800>. Presented work:
  - F. Damiano, P. Priore, M. Testini, **S. Tacconi**, A. Gnoni, L. Siculella. Relevance of oleic acid and hydroxytyrosol, main compounds of extravirgin olive oil, in the inhibition of cholesterol and fatty acid biosyntheses in C6 glioma cells.

## Editor for peer-reviewed journals

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Guest-Editor of the methods collections “Extracellular Vesicles as Biological Nanocarriers: Methods for Isolation, Engineering, Characterization and Biological Applications” for Jove video Journal (<https://app.jove.com/methods-collections/1058>), 2021.

## Posters

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- F. Vari, D. Vardanyan, S. Dinarelli, D. Passeri, M. Rossi, **S. Tacconi**, L. Dini. AFM topographical mapping of budding of extracellular vesicles in temozolomide treated glioblastoma cells. Biophysics@Rome Conference, 2023, Italy.
- C. Sbarigia, S. Dinarelli, F. Mura, L. Buccini, F. Vari, D. Passeri, M. Rossi, **S. Tacconi**, L. Dini. Atomic force microscopy characterization of extracellular vesicles and cellular budding. Biophysics@Rome Conference, 2023, Italy.
- **S. Tacconi**, A.M. Giudetti, F. Angilé, F.P. Fanizzi, A. Jalabart, R. Nieuwland, L. Dini, S. Rome. Lipoglucotoxicity associated with High-Fat Diets affects the biological activity of M2-CD163+ macrophage-release extracellular vesicles which affect skeletal muscle cell homeostasis. “Extracellular Vesicles in Endocrinology and Metabolism Symposium” of the Danish Diabetes and Endocrine Academy, 2023, Denmark.
- C. Sbarigia, **S. Tacconi**, S. Dinarelli, S. Scaricamazza, C. Valle, S. Rome, L. Dini. Extracellular vesicles derived from plasma and skeletal muscle of SOD1-G93A mice models of Amyotrophic Lateral Sclerosis alter the phenotype and redox balance of recipient motoneuron-like cells. ISEV2023 (INTERNATIONAL SOCIETY OF EXTRACELLULAR VESICLES), 2023, Seattle.
- **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier F. Angilé, F.P. Fanizzi, A. Jalabart, R. Nieuwland, S. Rome, L. Dini. Macrophage-derived extracellular vesicles affect skeletal muscle homeostasis under lipoglucotoxic stress associated with high-fat diet. ISEV2023 (INTERNATIONAL SOCIETY OF EXTRACELLULAR VESICLES), 2023, Seattle.
- S. M. SEGHETTI, A. VILLA, F. COGNIGNI, **S. TACCONI**, G. SENCZUK, M. ROSSI, R. CASTIGLIA. Skull Osteology of *Podarcis latastei* (Squamata, Lacertidae): A preliminary description and comparison. Societas Herpetologica Italica conference, 2022, Italy.
- E. Panzarini, S. Leporatti, B. A. Tenuzzo, A. Quarta, N.A.N. Hanafy, G. Giannelli, C. Moliterni, D. Vardanyan, C. Sbarigia, **S. Tacconi**, M. Fidaleo, L. Dini. Polymeric nanomicelles formulation of LY2157299-Galunisertib improves therapeutic outcome by greater reducing fibrosis and ameliorating fatty degeneration in a CCL4-induced hepatic-fibrosis rat-model. THE INTERNATIONAL LIVER CONGRESS, June 2022, London.
- **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier, S. Longo, F. Angilé, F.P. Fanizzi, E. Panzarini, F. Mura, M. Rossi, M. Fidaleo, A. Jalabart, B. Gillet, S. Hughes, R. Nieuwland, S. Rome, L. Dini. INSULIN-

RESISTANT M2-CD163+ MACROPHAGES RELEASE EXTRACELLULAR VESICLES AFFECTING LIPID METABOLISM AND EXTRACELLULAR MATRIX GENE EXPRESSION IN MUSCLE CELLS. 67th GEI (Italian Society of Developmental and Cell Biology) Conference, 2022, Gargnano, Italy.

- **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier F. Angilé, F.P. Fanizzi, A. Jalabart, R. Nieuwland, S. Rome, L. Dini. Macrophage-derived extracellular vesicles affect skeletal muscle homeostasis under lipoglucotoxic stress associated with high-fat diet. ISEV2022 (INTERNATIONAL SOCIETY OF EXTRACELLULAR VESICLES), 2022, Lyon
- D. Vardanyan, **S. Tacconi**, S. Dinarelli, M.C. Cufaro, E. Panzarini, P. Del Boccio, L. Dini. "Can Extracellular Vesicles derived from different temozolomide-treated glioblastoma multiforme cell lines be exploited as liquid biopsy?". ISEV2022 (INTERNATIONAL SOCIETY OF EXTRACELLULAR VESICLES), 2022, Lyon.
- C. Sbarigia, **S. Tacconi**, F. Mura, M. Rossi, L. Dini, S. Dinarelli. "High-resolution Atomic Force Microscopy as a tool for topographical mapping of surface budding". ISEV2022 (INTERNATIONAL SOCIETY OF EXTRACELLULAR VESICLES), 2022, Lyon.
- **S. Tacconi**, C. Sbarigia, S. Longo, M. Fidaleo, A.M. Giudetti, L. Dini. "Macrophages, Extracellular Vesicles and Immune Function: a new crosstalk in metabolic diseases and related alterations". EVIta 2021, Lucca (Italy).
- M.S.S. Intriago, C. Guerriero, **S. Tacconi**, A.M. Giudetti, C. Dallanocce, E. Pick, T. Rinaldi, L. Dini, A. M. Tata. Ubiquitin-proteasome system and mitochondrial respiration alterations and oxidative stress induction in human glioblastoma cells: role of the M2 muscarinic receptors. XV European Meeting on Glial Cells in Health and Disease 2021, Marseille (Online), France.
- **S. Tacconi**, "Ultracentrifugation vs Ultrafiltration combined to Size Exclusion Chromatography (SEC): a new experimental approach for isolation and characterization of extracellular vesicles". LEbiotec (European Biotech week), September 2020, Lecce (Italy).
- **S. Tacconi**, L. Dini, E. Panzarini. "Macrophages, Extracellular Vesicles and Inflammation: a new crosstalk in metabolic diseases and nutritional alterations". French Society of Extracellular Vesicles Conference (FSEV), November 2019, Nantes.
- **S. Tacconi**, E. Carata, S. Mariano, L. Dini, E. Panzarini. "Extracellular vesicles as natural nanoconstructs for modulating responses of immune cells in glioblastoma and hyperglycemia". LEbiotec (European Biotech week), 2018, Lecce (Italy).
- **S. Tacconi**, E. Carata, S. Mariano, L. Dini, E. Panzarini. "Extracellular vesicles as nature's nanoconstructs for modulating responses of immune cells in glioblastoma and hyperglycemia". Nanoinnovation, September 2018, Rome.
- M. Testini, **S. Tacconi**, G.V. Gnani, L. Sicuella, F. Damiano. (2017) "Human acetyl-CoA carboxylase 1 mRNA translation is enhanced in HepG2 cells under endoplasmic reticulum stress, serum deprivation or hypoxia". National Congress of the "Italian Society of Biochemistry and Molecular Biology (SIB)", September 2017, Caserta, Italy.
- F. Damiano, P. Priore, M. Testini, **S. Tacconi**, A. Gnani, L. Sicuella. (2017) "Relevance of oleic acid and hydroxytyrosol, main compounds of extravirgin olive oil, in the inhibition of cholesterol and fatty acid biosyntheses in C6 glioma cells". National Congress of the "Italian Society of Biochemistry and Molecular Biology (SIB)", September 2017, Caserta, Italy.

## Chair and Organization of international conferences and workshops

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- Senior chair for the best poster presentation in the session PT02 "Milk EVs" at international meeting of International Society of Extracellular Vesicles 2023 (ISEV2023), May 2023, Seattle, United States.
- Chair and organizer of the workshop "EXTRACELLULAR VESICLES: The new era of the intercellular communication" at the international conference "Nanoinnovation 2022", September 2022, Rome.

## Member of the organizing committee of

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- Nanoinnovation 2023, September 2023, Rome (Italy).
- Nanoinnovation 2022, September 2022, Rome (Italy).
- Nanoinnovation 2021, September 2021, Rome (Italy).

- Nanoinnovation 2020, September 2020, Rome (Italy).
- Nanoinnovation 2019, September 2019, Rome (Italy).
- Nanoinnovation 2018, September 2018, Rome (Italy).
- 15th Eurasia Conference on Chemical Sciences (EuAsC2S-15), September 2018, Rome (Italy).

## Invited speaker, oral presentations, conferences participation, and scientific memberships

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### Invited speaker

- “Premiere reunion inter-department sur les vesicules extracellulaires” organized by “Institut national de recherche pour l’agriculture, l’alimentation et l’environnement (INRAE), September 2023, Paris (France). Title: The dialog between skeletal muscle and macrophages mediated by extracellular vesicles.
- “Extracellular Vesicles in Endocrinology and Metabolism Symposium” of the Danish Diabetes and Endocrine Academy, June 2023, Aalborg (Denmark). Title: Lipoglucotoxicity associated with High-Fat Diets affects the biological activity of M2-CD163+ macrophage-release extracellular vesicles which affect skeletal muscle cell homeostasis
- International conference “Symposium on nanomedicine-derived therapeutic and diagnostic approaches” of Hebei University, May 2023, Hebei (China). Title: Macrophages, extracellular vesicles and immune function: A new crosstalk in metabolic diseases and related alterations.
- International conference "Nanoinnovation 2022" as opening invited lecture for the session "Multiscale & multitechniques for Characterization", September 2022, Rome, Italy. Title: Micro- and nano-sized plastics in biological matrices: analysis and characterization through microscopic approaches.
- Workshop "EXTRACELLULAR VESICLES: The new era of the intercellular communication" at the international conference "Nanoinnovation 2022", September 2022, Rome, Italy. Title: Bovine Milk-derived Extracellular Vesicles as new drug delivery system for bioactive compounds.
- Summer school “Nanotechnology in Agriculture” organized by University of Tuscia, June-July 2022, Viterbo, Italy. Title: Microscopy techniques for visualizing nanomaterial in plant tissues.
- Oral presentations
- International conference "Nanoinnovation 2021" 2021, Rome, Italy. Title: Phytochemical delivery in olive plants:
- microscopic and proteomic evaluation.
- International conference "Nanoinnovation 2020" in the symposium «Natural, artificial and synthetic nanovesicles, September 2020, Rome (Italy). Title: Macrophages extracellular vesicles and immune function: a new crosstalk in metabolic disease and related disorders.
- 64th GEI-SIBSC (Gruppo Embriologico Italiano-Italian Society of Developmental and Cell Biology) Conference, June 2018, L'Aquila (Italy). Title: Extracellular vesicles and macrophage polarization upon hyperglycaemic stress.

### Co-author of oral presentations§

- D. Vardanyan\*, **S. Tacconi**\*, I. Efimova, R. Demunynck, D.V. Krysko, L. Dini. The role of extracellular vesicles in the modulation of temozolomide-resistant and sensitive glioblastoma cells. 3rd EVIta symposium, September 2023, Urbino (Italy).
- D. Vardanyan, I. Efimova, R. Demunynck, **S. Tacconi**, D.V. Krysko, L. Dini. GLIOBLASTOMA-DERIVED EXTRACELLULAR VESICLES INDUCED MATURATION OF DENDRITIC CELLS: A PROMISING APPROACH FOR IMMUNOTHERAPY. 68th GEI (Italian Society of Developmental and Cell Biology) Conference, June 2023, Messina, Italy.
- **S. Tacconi**, S. Longo, C. Moliterni, V.M. Paradiso, G. Difonzo, F. Caponio, D. Vergara, L. Dini, A.M. Giudetti. Oxidative stress and lipid accumulation associated with an in vitro NAFLD model were reduced by olive leaf extract. 68th GEI (Italian Society of Developmental and Cell Biology) Conference, June 2023, Messina, Italy.
- F. Vari\*, D. Vardanyan, L. Valli, G. Giancane, S. Tacconi\*, L. Dini. MICROPLASTICS FROM FFP2 MASKS AFFECT PARACENTROTUS LIVIDUS DEVELOPMENT. 68th GEI (Italian Society of Developmental and Cell Biology) Conference, June 2023, Messina, Italy.
- D. Vardanyan\*, **S. Tacconi**\*, I. Efimova, R. Demunynck, D.V. Krysko, L. Dini. Temozolomide induced changes in the glioblastoma derived extracellular vesicles: from quantity to proteomic profile. Symposium on nanomedicine-derived therapeutic and diagnostic approaches of Hebei University, May 2023, Hebei (China).



- C. Sbarigia, D. Vardanyan, **S. Tacconi**, F. Mura, M. Rossi, L. Dini, S. Dinarelli. ATOMIC FORCE MICROSCOPY: A NEW EXPERIMENTAL APPROACH FOR TOPOGRAPHICAL MAPPING OF SURFACE BUDDING. 67th GEI (Italian Society of Developmental and Cell Biology) Conference, 2022, Gargnano, Italy.
- D. Vardanyan\*, **S. Tacconi**\*, S. Dinarelli, F. Mura, M.C. Cufaro, E. Panzarini, D. Passeri, M. Girasole, G. Longo, M. Rossi, P. Del Boccio, L. Dini, A step toward precision medicine using extracellular vesicles derived from different temozolomide-treated glioblastoma cells. Conference NanoInnovation 2022, September 2022, Rome, Italy.
- D. Vardanyan\*, **S. Tacconi**\*, S. Dinarelli, F. Mura, M.C. Cufaro, E. Panzarini, P. Del Boccio, L. Dini, Glioblastoma multiforme-derived extracellular vesicles undergo proteomic changes after treatment with chemotherapeutic agent Temozolomide, Workshop "EVIta connect: Fostering collaboration", September 2022, Turin, Italy.
- L. Dini, **S. Tacconi**, E. Panzarini. Microvesicles and exosomes in metabolic diseases: their role in inflammation. Conference "Therapeutic Nanoproducts: from Biology to Innovative Technology" organized by Istituto superiore di sanità e Associazione Italiana colture cellulari (AICC), June 2019, Rome, Italy.

§presenter is underlined

\*Co first author

## Conferences participation and poster presentation

- 68th GEI (Italian Society of Developmental and Cell Biology) Conference, June 2023, Messina (Italy). Title of poster: Bovine milk extracellular vesicles: an oral drug delivery system for bioactive compounds. Authors: **S. Tacconi**, L. Buccini, S. Sennato, S. Dinarelli, M. Zuccotti, L. Dini.
- International Society of Extracellular Vesicles 2023 (ISEV2023), May 2023, Seattle (United States). Title of poster: Lipoglucotoxicity associated with high-fat diet affects the biological activity of macrophage-release extracellular vesicles which modulates skeletal muscle cell homeostasis. Authors: **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier, F. Angilé, F.P. Fanizzi, A. Jalabart, R. Nieuwland, S. Rome, L. Dini.
- International Society of Extracellular Vesicles 2022 (ISEV2022), May 2022, Lyon (France). Title of poster: Insulin-resistant M2-CD163+ macrophages release extracellular vesicles affecting lipid metabolism and extracellular matrix gene expression in muscle cells. Authors: **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier, S. Longo, F. Angilé, F.P. Fanizzi, E. Panzarini, F. Mura, M. Rossi, M. Fidaleo, A. Jalabert, B. Gillet, S. Hughes, R. Nieuwland, S. Rome, L. Dini.
- 67th GEI (Italian Society of Developmental and Cell Biology) Conference as speaker, June 2022, Gargnano (Italy). Title of poster: Insulin-resistant M2-CD163+ macrophages release extracellular vesicles affecting lipid metabolism and extracellular matrix gene expression in muscle cells. Authors: **S. Tacconi**, A.M. Maria Giudetti, E. Meugnier, S. Longo, F. Angilé, F.P. Fanizzi, E. Panzarini, F. Mura, M. Rossi, M. Fidaleo, A. Jalabert, B. Gillet, S. Hughes, R. Nieuwland, S. Rome, L. Dini.
- "EV-based biomarkers" workshop of the Italian Society of Extracellular Vesicles (EVIta), September 2020, Italy.
- "LEbiotec (European Biotech week)", September 2020, Lecce (Italy). Title of poster: Ultracentrifugation vs Ultrafiltration combined to Size exclusion chromatography (SEC): a new experimental approach for isolation and characterization of extracellular vesicles from cultured medium. Authors: **S. Tacconi**.
- "French Society of Extracellular Vesicles Congress (FSEV)", November 2019, Nantes (France). Title of poster: Macrophages, Extracellular Vesicles and Inflammation: a new crosstalk in metabolic diseases and nutritional alterations. Authors: **S. Tacconi**, L. Dini, E. Panzarini.
- "LEbiotec (European Biotech week)", 2018, Lecce (Italy). Title of poster: Extracellular vesicles as natural nanoconstructs for modulating responses of immune cells in glioblastoma and hyperglycemia. Authors: **S. Tacconi**, E. Carata, S. Mariano, L. Dini, E. Panzarini.
- "ICAR (Italian Conference on AIDS and Antiviral Research)", 2016, Milan, Italy.
- "ICAR (Italian Conference on AIDS and Antiviral Research)", 2015, Riccione, Italy.

## Scientific membership

- Member of the Italian Society of Extracellular Vesicles (EVIta)
- Member of the International Society of Extracellular vesicles (ISEV)
- Member of "Gruppo embriologico italiano – Società Italiana dello sviluppo e della cellula (GEI-SIBSC)

## Reviewer for international peer-reviewed journals

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- Molecular Nutrition and Food Research
- Nature protocols

## Grants

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- **Title of the project:** MEXID (Muscle release Extracellular vesicles in the context of Insulin-resistance associated with Diabetes)  
**Role:** Dr. Sophie Rome as PI of the project and Dr Stefano Tacconi as PI of workpackage 1, (CarMeN Laboratory, Lyon, France)  
**Total funding:**  
**Dedicated work time:** 3 years (2023-2026)  
**Program:** ANR (French national agency of research)
- **Title of the project:** Plasma-derived extracellular vesicles from in vivo models of neurological disorders and their impact on muscle and vascular function Progetto Grandi di Ateneo, PI Prof.ssa Luciana Dini (Sapienza University of Rome)  
**Role:** External collaborator of PI Prof. L. Dini (Sapienza University of Rome, Rome, Italy)  
**Total funding:**  
**Duration of the project:** 3 years (2022-2025)  
**Program:** progetti di Ateneo, Sapienza Università di Roma
- **Title of the project:** Effects mediated by novel inhibitors of CSN pathways in human glioblastoma cancer stem cells and normal astrocytes. PI Prof. A. M. Tata (Sapienza University of Rome, Rome, Italy)  
**Role:** Investigator of Unit of Prof. L. Dini (Sapienza University of Rome, Rome, Italy)  
**Total funding:**  
**Dedicated work time:** 4 months (2022)  
**Program:** progetti di Ateneo, Sapienza Università di Roma
- **Title of the project:** Professional Development Internship Program, new Approaches to Teaching and Learning:  
Theory and Practice Prof Kuanysh Syman Almaty University Kazakhstan.  
**Role:** Investigator of PI L. Dini for development internship of Biotechnology. Green Innovation and Bioengineering topics  
**Total funding:**  
**Dedicated work time:** 10 months (2022) February 15, 2022 to December 15, 2022  
**Program:** International Programs Center JSC of the Bolashak International Scholarship
- **Title of the project:** NEMESI (Nanotecnologie chimiche green per la protezione Sostenibile delle piante), ARS01\_01002. PI Prof. G. Ciccarella (University of Salento, Lecce, Italy)  
**Role:** Investigator of Nanoshare s.r.l. Unit (Rome, Italy)  
**Total funding:**  
**Dedicated work time:** 4 months (2022)  
**Program:** PON projects
- **Title of the project:** Oli.Di.X.I.T (Olive growing and defense against Xylella fastidiosa and vector insects in Italy) PI Prof. Giuseppe Ciccarella  
**Role:** Investigator of University of Salento Unit  
**Total funding:**  
**Dedicated work time:** 1 year (2021-2022)  
**Program:** Ministero delle politiche agricole alimentari forestali e del turismo, Dipartimento delle Politiche Competitive del Mondo Rurale e della Qualità Direzione Generale Della Competitività Per Lo Sviluppo Rurale.

## Awards

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- Best oral presentation for young researchers at the conference GEI (Italian Society of Developmental and Cell Biology) Conference, June 2018, L'Aquila (Italy). Title: Extracellular vesicles and macrophage polarization upon hyperglycaemic stress.
- Graduation award named in memory of "Dr. M. A. Pati" 2016-2017 as best thesis work in the bio-health field. University of Salento, March 2018.

## Teaching activities

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### Theoretical lessons, seminars, and practical laboratory lessons

- technical-practical support to the laboratory activities of bachelor's degree course in "Biologia cellulare e istologia" SSD BIO/06 (bachelor's degree L13, Sapienza University of Rome), December 2022-January 2023;
- teaching support activities for the technical-practical lessons of the degree course in "biomarcatori di alterazioni ambientali" SSD BIO/06 (master's degree LM75, Sapienza University of Rome), May-June 2023;
- lessons/seminars for the master's degree course in "Nanobiotechnologie" SSD BIO/06 (master's degree LM8, Sapienza University of Rome) about Extracellular vesicles biogenesis and characterization, and their applications for drug-delivery, AA 2021-2022/ AA 2022-2023
- lesson/seminar for the master's degree course in "Physiology of Nutrition" SSD BIO/09 (master's degree LM6, University of Salento) about extracellular vesicles biogenesis and characterization and their role in metabolism, June 2023.
- lesson/seminar for the master's degree course in "Biochemistry II" SSD BIO/10 (master's degree LM6, University of Salento) about extracellular vesicles biogenesis and role in metabolism and metabolic alterations with the title "Vescicole extracellulari (EVs) come nuovo sistema di comunicazione intercellulare", June 2023.

### Culture della materia

Named as expert (**culture della materia**) in "Biomarkers for environmental monitoring" SSD BIO/06 at the Department of Environmental Biology, Sapienza University of Rome (AA 2022/23).

### Co-supervisor of bachelor's and master's theses:

- July 2023 (master's degree in Medical Biotechnology, Sapienza University of Rome), FRATINI NICOLE: Role of extracellular vesicles in ALS: neurocentric or dying back hypothesis (SSD BIO/06);
- October 2022 (master's degree in Environmental monitoring and qualification, Sapienza University of Rome), IRENE MAGLIOCCHETTI: FFP2 masks degradation and their effect on the development of the Sea Urchin *Paracentrotus lividus* (SSD BIO/06);
- October 2022 (master's degree in Genomic, environmental and industrial biotechnology, Sapienza University of Rome), LUCA BUCCINI: The extracellular vesicles of bovine milk as an innovative system for the delivery of nano-curcumin (SSD BIO/06);
- October 2022 (master's degree Cellular Biology and Technologies, Sapienza University of Rome), FRANCESCO VARI: Polystyrene nanoplastics: from eco-toxicology on *P. lividus* embryonic development to toxicokinetics in in vitro cellular models of the gastrointestinal barrier (SSD BIO/06);
- July 2020 (Master's Degree in Medical Biotechnology and Nanobiotechnology, University of Salento), MUCI MARCO: Extracellular vesicles released by macrophages subjected to hyperglycemic stress induce a pro-inflammatory phenotype in differentiated THP-1 macrophages (SSD BIO/06);
- July 2019 (three-year degree in Biological Sciences, University of Salento), LO MARTIRE MARIA CARMEN: Role of extracellular vesicles in diabetes and related metabolic disorders (SSD BIO/06);
- October 2019 (Bachelor's Degree in Biological Sciences, University of Salento), MAZZARELLA LETIZIA: Lipotoxicity and macrophage activation: role of extracellular vesicles in the inflammatory process (SSD BIO/06);

- October 2019 (Bachelor's Degree in Biological Sciences, University of Salento), FRACELLA MATTEO: Extracellular vesicles: immuno-modulatory activity of macrophages under hyperglycemic-stress conditions (SSD BIO/06);

## Third Mission

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- teaching support activities within the PTCO (Percorsi per le Competenze Trasversali e l'Orientamento) projects for the Laboratory for Nanotechnologies and Nanosciences of Sapienza (SNN-Lab), Sapienza University of Rome (2021 and 2022).
- Co-Founder of the start-up Zooxoil srl (under approval to Regione Lazio)

## Research activities

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During his entire career, he has developed numerous scientific research interests, mainly related to cell and developmental biology, nanobiotechnology and toxicology. Specifically, a constant scientific commitment and significant skills have been devoted to extracellular vesicles field with particular focus on:

- New and advanced methods for extracellular vesicles isolation and characterization from various biological samples (i.e., blood, conditioned medium, tissue and milk), including single-EV analysis and high-resolution microscopy;
- Extracellular vesicles biogenesis;
- Use of zebrafish as a model to study the biogenesis and fate of extracellular vesicles through high-resolution imaging;
- Biological role of extracellular vesicles in neuronal development and function in amyotrophic lateral sclerosis (ALS);
- Effects of macrophage-derived extracellular vesicles in modulating myotubes differentiation and function in presence of an obesogenic environment;
- Biology of extracellular vesicles in glioblastoma and their immunogenic activity;
- Application of milk-derived extracellular vesicles as drug-delivery systems for bioactive compounds.

Furthermore, important research activities have been conducted in the field of nanotechnology and nanotoxicology, such as:

- Novel high-resolution microscopy approaches for the analysis of cell morphology at the micro- and nano-scale;
- Characterization and biological activity of new drug-delivery systems;
- Use of nanostructured formulations for the treatment of plant diseases (i.e. *Xylella fastidiosa*);
- Effects of micro-/nanoplastics, pollutants and nanoparticles on the embryo development of model organisms (i.e., Sea Urchin *Paracentrotus lividus*)

**Keywords:** extracellular vesicles biology, cell development and function, nanobiotechnology, toxicology

## Methodological and working skills

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Different skills in the field of conventional and innovative methods and techniques of cellular/molecular/developmental biology, biochemistry, and electron, and fluorescence microscopy. Among the various skills are: growth and maintenance of cell cultures, biochemical techniques for the extraction and analysis of protein expression; proteomic analysis; gene expression analysis; scanning and transmission electron microscopy; cryo-EM; fluorescence microscopy; confocal microscopy; atomic force microscopy; x-ray tomography; Raman spectroscopy; spectrofluorimetric and colorimetric enzymatic activity tests; isolation and characterization of extracellular vesicles from culture medium and various biological fluids (i.e. blood, tissue, conditioned medium, milk) by classical and advanced methods; Nano-tracking analysis and microfluidic resistive pulse sensing for the analysis of the Size distribution of nanostructured material or extracellular vesicles; calibrated flow cytometry; high-resolution polarography.

## Computer skills

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Excellent knowledge of computers and different operating systems (Windows and macOS), Office packages (Word, Excel, PowerPoint), and graphics programs (such as Adobe Photoshop). Skills in statistical analysis of data through dedicated programs, such as Prism GraphPad. Extensive knowledge in the use of programs dedicated to image analysis, such as ZEN (Zeiss), Gwyddion, and ImageJ and bioinformatic tools for omic data analysis.

## Organizational and managerial skills

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During his academic career he has acquired notable managerial, organizational, working and teaching skills. In addition to coordinating and organizing scientific projects, laboratory activities, conferences and degree theses, the active experience abroad has favored a dense network of international and national collaborations led to a rapid and varied scientific production in short time of scientific activity.

## Bibliometric indices

**Source: Google Scholar** (<https://scholar.google.com/citations?hl=it&user=Si8sCpwAAAAJ>)

Total publications: 13  
Total Impact factor: 59,76  
Average Impact factor: 4,59  
Total Citations: 261  
Average Citations per product: 20,07  
Hirsch (H) index: 8  
Normalized H index\*: 2,6

**Source: Scopus** (<https://www.scopus.com/authid/detail.uri?authorId=57212756456>)

Total publications: 12  
Total Impact factor: 59,76  
Average Impact factor: 4,98  
Total Citations: 190  
Average Citations per product: 15,83  
Hirsch (H) index: 7  
Normalized H index\*: 2,3

Curriculum vitae redatto in modo da garantire la conformità del medesimo a quanto prescritto dall'art. 4 del codice in materia di protezione dei dati personali e dell'art. 26 del D. Lgs. 14 marzo 2013 n. 33, al fine della pubblicazione

Ai sensi dell'art. 46 e 47 del DPR 445/2000, dichiaro che le informazioni inserite nel mio CV corrispondono a verità, essendo consapevole dell'eventuale applicazione dell'art. 76 dello stesso articolo in caso di dichiarazione mendace.

Luogo e Data  
Lyon, 1/10/2023

Firma