PERSONAL INFORMATIONS

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ENEA WEBSITE:	HTTPS://BIOTEC.SOSTENIBILITA.ENEA.IT/EN/USER/384

FIELDS OF INTEREST

Evaluation of the effects of exposure of electromagnetic fields on biological system, principally on the nervous system, aimed at understanding the mechanisms involved in this interaction not only to evaluate the possible negative effects, but above all to improve their application in therapeutic treatments and develop highly innovative technologies based on their use.

Project managing: dynamic and results-oriented professional management, developed during the long path as a researcher and matured with four years of experience leading an international team and promoting innovation in the coordination of the deep-tech RISEUP project (FET-OpenH2020, N.964562). The solid expertise in project management, process optimization and cross-functional collaboration has also been strengthened through participation in specific courses and programs of the European Innovation Council (listed later in this CV), as well as participation in the academic year 2024/2025 in an advanced training course at Sapienza University of Rome (see paragraph Education and Training)

EIC (European Innovation Council) PROGRAMMES

- **2024** April 4th-June 6th **EIC Business validation programme**
- **2024** January 8th-10th **EIC Bootcamp for innovative researchers**
- **2023** November 6th- 10th **EIC Tech to Market (T2M) Innovation Discovery Training**
- **2023** March 2023-July **EIC Tech to Market (T2M) "pioneer programme for innovative researchers"**
- **2022** May 2022-November **EIC Women Leadership programme 2nd cohort**

SKILLS DEVELOPED:

- Leadership & Team Management: Skilled in building high-performing teams and cultivating a collaborative work environment.
- Strategic Planning: Expertise in developing and implementing long-term strategies that align with organizational goals.
- Innovation Management: Adept at fostering an innovative culture, managing the lifecycle of new ideas from conception to execution and to the exploitation.
- Project Management: Proficient methodologies, project planning, and resource allocation.
- Data-Driven Decision Making: Strong analytical skills to inform business decisions and optimize processes.
- Communication & Stakeholder Engagement: Excellent interpersonal skills to effectively communicate with stakeholders at all levels acquired pitching business ideas to investors, presenting research results at national and international conferences, and coordinating the organization of events in ENEA aimed at divulgating knowledge and science, such as The European night of Researchers, or at educational guiding high school students
- Computer skills and competences: Qualified user

WORK EXPERIENCE

2010 -onwards **Researcher: Laboratory of RED Biotechnologies, at Department for Sustainability**
ENEA –Italian National Agency for New Technologies, Energy, and Sustainable Economic Development, Rome, Italy
Responsible for administering day-to-day technical and scientific operations of a research environment. Examination of experimental data, students training, creation of reports, management of scientific projects, and liaising with internal and external collaborators.

2008- 2010 **Contract Researcher: Oncological Immunology Department**
National Cancer Institute "G. Pascale", Naples
Management experimental project. Research theme: role of chemokines receptors in tumour development. Research design, experimental and administrative project management, students training.

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2006-2008 **Contract Biologist: Biochemistry and Molecular Genomics Department**
"Loreto Crispi" Hospital, Naples
Molecular diagnosis of leukemia, evaluation of minimal residual disease
Analysis of Angiotensin Converting Enzyme (ACE) and Plasminogen Activator Inhibitor-1 (PAI-1) polymorphisms involvement in Metabolic Syndrome.

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2002- 2006 **Postdoctoral Fellow: Developmental Neurobiology Laboratory**
Genetics and Biophysics Institute (IGB), National Research Council (CNR), Naples
Fellowship subject: Role of the Glial Derived Neurotrophic Factor (GDNF) in embryonic midbrain neurons development.

1997- 2001 **PhD Student: Cellular and Molecular Biology and Pathology Department**
"Anton Dohrn" Zoological Station, "Federico II" University, Faculty of Medicine, Naples,
Fellowship subject: Anaysis of molecular mechanisms involved in epithelium / mesenchyme transition during embryonic development.

1994- 1997 **Junior scientist Fellowship: Cellular and Molecular Biology and Pathology Department**
Molecular Oncology Laboratory, Faculty of Medicine, "Federico II" University, Naples,
Fellowship title: Molecular mechanisms of thyroid carcinomas.

EDUCATION AND TRAINING

academic year 2024-2025 **advanced training course in Project, Program and Portfolio Management**
Sapienza University of Rome

2010 **Specialist in Medical Genetics**
University "G. d'Annunzio", Chieti – Faculty of Medicine
Thesis title: "CXCL12/CXCR4/CXCR7 axis role in the process of tumorigenesis of renal cell carcinoma".

2002 **PhD in Molecular and Cellular Biology and Pathology**
"Federico II" University, Faculty of Medicine, Naples
Thesis title: "Gene regulation mechanisms that trigger epithelium / mesenchyme transition during sea urchin embryonic development: possible involvement of protein kinase ERK and SpElk."

1994 **Master's Degree in Biological Sciences**
"Federico II University", Naples – Faculty of Mathematical, Physical and Natural Sciences
Thesis title: "Isolation and characterization of pancreatic ribonuclease from shark".

GRANTS (LAST 5 YEARS)

1/05/2021-30/04/2025 **Coordinator of the project** "Regeneration of Injured Spinal cord by Electro pUlsed bio-hybrid implant" (RISEUP), 964562, Horizon 2020 Framework Programme Call: H2020-FETOPEN-2018-2019-2020-01

MEMBERSHIPS

2021-onwards: International society for electroporation-based technologies and treatments (ISEBTT)
2022-onwards: International Union of Radio Science (URSI)
2021- onwards: Bio-electromagnetic society (BioEM)
2021-onwards: International Union of Radio Science; from 2023 also member of WIRS (women in radioscience)

OTHER

Member of European Innovation Council Health Community of Practice (https://ebn.eu/2024/01/25/join-eic-communities-uniting-european-innovators-for-deep-tech-advancements/)

Lecturer at the Faculty Molecular Biotechnology, degree programme Cellular and Molecular Neurobiology and Neuropathology, University of Campania "Luigi Vanvitelli"

Lecturer at the Faculty of Biology (Biosanitary Orientation), degree program "General Pathology", University of Campania "Luigi Vanvitelli"

2018 August 16th-August 31st: Visinting Scientist with a COSTaction fellowship at Neuronal and Tissue Regeneration Laboratory, Centre de Investigacion Principe Felipe, Valencia

2017 February 26th-18 March 17 and july 24th-August 18: Visinting Scientist with a COST fellowship Action at CNRS, UMR 8203 Vectorology and Anticancer Therapies Laboratory, Gustave Roussy Hospital, Villejuif, Paris

June 12th 2014-August 31st 2014: Visiting Scientist at Cell Stress and Survival Department of Danish Cancer Research Center, Copenhagen

02/28/2016-03/03/2016 Invited as International Expert on bio-electromagnetism at Kelantan and Perlis Universities of Malaysia

2013 External Expert (Biomedicine and Molecular Biosciences) for evaluation of European Cooperation in Science and Technology (COST) proposals, Call 2012-2

2015 External Expert (Biomedicine and Molecular Biosciences) for evaluation of European Cooperation in Science and Technology (COST) proposals, Call OC-2015-1 and Call OC-2015-2

2016 External Expert (Biomedicine and Molecular Biosciences) for evaluation of European Cooperation in Science and Technology (COST) proposals Call OC-2016-1

WORKHOPS AND INTERNATIONAL CONGRESSES ORGANIZATION (LAST 5 YEARS)

2025 "Cutting-edge strategies for spinal cord injury: the journey and results of RISEUP project" Workshop, March 21st, Rome.

2024 "Treatment of spinal cord injury: novel strategies and updates from the RISEUP project", 5th World Congress Electroporation, September 17th, Rome.

2023 "Spinal cord injuries and possible strategies to repair them. New updates on the use of stem cells electrical stimulation for tissue regeneration", BioEM 2023, June 19th, Oxford, UK.

2021 Meeting European project RISEUP Titolo:*"Regeneration of Injured Spinal cord by Electro pUlsed bio-hybrid aPproach A FET-OPEN project about the setting of an innovative method for spinal cord injuries treatment (to improve patients' quality of life, contributing to the sustainability of the healthcare system)*", September 6th -7th Villa Lubin, Rome

INTERNATIONAL MEETING PARTICIPATION AS INVITED SPEAKER (LAST 5 YEARS)

- ✓ Microsecond Electric Pulses and DC stimulation: A Promising Approach to Targeting Inflammation. BioEM 2025, June 22-27 Rennes (France).
- ✓ Pioneering solutions for spinal cord injuries: the biotechnological contribution and impact of the RISEUP project. X Symposium of the Spinal Cord Injury Research Group "From basic research to rehabilitation: opportunities and challenges", Verona (Italy) March 28th, 2025.
- ✓ Three years of RISEUP project: how microsecond electric pulses stimulation are applied to induce the spinal cord regeneration, 2024 BioEM2024, Chania (Greece), June 16-21.
- ✓ Microsecond electric pulses effects in spinal cord injuries: results from RISEUP project, 2023 ICEAA/IEEE APWC, Venice (Italy), October 9-13.
- ✓ RISEUP project: an innovative application of microsecond electric pulses for spinal cord injury regeneration, IMBioC2023, Leuven (Belgium), September 11-12.
- ✓ Microsecond electric pulses effects on stem cells: results from RISEUP project, URSI General Assembly and Scientific Symposium 2023, Sapporo (Japan), August 19-26, 2023.
- ✓ Anti-inflammatory effect of microsecond pulses for spinal cord injury treatment, URSI General Assembly and Scientific Symposium 2023, Sapporo (Japan), August 19-26, 2023
- ✓ Evaluation of the possible therapeutic effect of Pulsed Electromagnetic Fields (PEMF) on different stages and progression of Amyotrophic Lateral Sclerosis (ALS), BioEM 2023, June 18-23, Oxford, UK

- ✓ RISEUP presentation at European Innovation council summit 2022, MedTech session, Bruxelles, December 7-8.
- ✓ RISEUP: Regeneration of Injured Spinal cord by Electro pUlsed bio-hybrid imPlant. 4th World Congress of electroporation (WC2022), Copenhagen, October 9-13 2022.
- ✓ Pulsed Electro-magnetic Field (PEMF) and Amyotrophic Lateral Sclerosis (ALS): an innovative experimental cell model to evaluate the involvement of adenosine receptor A2A in disease progression. URSI Atlantic / Asia-Pacific Radio Science (AT-AP RASC) Meeting -2022, Gran Canaria, Spagna, 29 maggio-3 giugno 2022
- ✓ Biological effects of ultrashort electric pulses in a Neuroblastoma cell line: the energy density role. URSI GASS 2021, Rome, Italy, 28 August - 4 September 2021.
- ✓ RISEUP: Regeneration of Injured Spinal cord by Electro pUlsed bio-hybrid implant. URSI GASS 2021, Rome, Italy, 28 August - 4 September 2021.

PEER REVIEWED SCIENTIFIC PUBLICATIONS (LAST 5 YEARS)

H-INDEX= 21 (Ref. *https://scholar.google.com/citations?user=i7Wr7x4AAAAJ&hl=it*)

***Corresponding author**

- Mannino L, Marracino P, Gisbert Roca F, López-Mocholi E, Pedraza-Boti M, Balucani M, André F, Mir L, Ivashchenko S, Navarro Páez F, Martinez-Ramos C, Monleón-Pradas M, Lopez-Grobas I, Buceta-Fernandez J, Colella M, Fontana S, Liberti M, Apollonio F, Merla C, **Consales C ***, Moreno-Manzano V Electrical stimulation and stem cell subdural implantation decrease microglia reactivity after severe spinal cord injury. Submitted on *Brain Stimulation***.**
- Fontana S, Paffi A, Caramazza L, Colella M, Dolciotti N, Moreno-Manzano V, André F, Apollonio F, Liberti M Modeling Stem Cells Neurodynamics and Calcium Oscillations under Pulsed Electric Fields for Spinal Cord Injury: A Multiscale and Multiphysics Approach. *In press on Bioelectricity*
- Vallet LA, Sánchez-Petidier M, Fernandes R, Naumova N, Merla C, **Consales C**, Innamorati G, André FM, Mir LM. Calcium oscillations in mesenchymal stem cells, a control on cell cycle progression to influence cell fate towards proliferation or differentiation? *Stem Cell Res Ther*. 2025 Aug 21;16(1):446. doi: 10.1186/s13287-025-04454-8.
- Innamorati G, Sanchez-Petidier M, Bergafora G, Codazzi C, Palma V, Camera F, Merla C, André FM, Pedraza Boti M, Moreno Manzano V, Caramazza L, Colella M, MarracinoP, **Consales C*** Characterization of mesenchymal and neuronal stem cells response to bipolar microsecond pulses electric stimulation. *J. Mol. Sci.* **2025**, *26*(1), 147; https://doi.org/10.3390/ijms26010147 (registering DOI).
- Pietrafesa D, Casamassa A, Benassi B, Santoro M, Marano M, **Consales C**, Rosati J, Arcangeli C. Investigating the Impact of the Parkinson's-Associated GBA1 E326K Mutation on β-Glucocerebrosidase Dimerization and Interactome Dynamics Through an In Silico Approach Int J Mol Sci. 2024 Oct 24;25(21):11443. doi: 10.3390/ijms252111443
- Cordelli E, Ardoino L, Benassi B, **Consales C**, Eleuteri P, Marino C, Sciortino M, Villani P, Brinkworth MH, Chen G, McNamee JP, Wood AW, Belackova L, Verbeek J, Pacchierotti F Effects of radiofrequency electromagnetic field (RF-EMF) exposure on male infertility: a systematic review of experimental studies on non-human mammals and human sperm in vitro. In press on Environmental International
- Camera F, Colantoni E, Garcia-Sanchez T, Benassi B, **Consales C**, Muscat A, Vallet L, Mir LM, Andre F, Merla C In Vitro Imaging and Molecular Characterization of Ca2+ Flux Modulation by Nanosecond Pulsed Electric Fields.
  .Int J Mol Sci. 2023 Oct 26;24(21):15616. doi: 10.3390/ijms24211561
- Fontana S, Caramazza L, Marracino P, Cuenca Ortolá I, Colella M, Dolciotti N, Paffi A, Gisbert Roca F, Ivashchenko S, Más Estellés J, **Consales C,** Balucani M, Apollonio F, Liberti M. Electric field bridging-effect in electrified microfibrils' scaffolds.
  Front Bioeng Biotechnol. 2023 Oct 25;11:1264406. doi: 10.3389/fbioe.2023.1264406.
- Cordelli E, Ardoino L, Benassi B, **Consales C**, Eleuteri P, Marino C, Sciortino M, Villani P, Brinkworth MH, Chen G, McNamee JP, Wood AW, Belackova L, Verbeek J, Pacchierotti F Effects of Radiofrequency Electromagnetic Field (RF-EMF) exposure on pregnancy and birth outcomes: A systematic review of experimental studies on non-human mammals. .Environ Int. 2023 Oct;180:108178. doi: 10.1016/j.envint.2023.108178.
- **Consales C*,** Merla C, Benassi B, Garcia-Sanchez T, Muscat A, André FM, Marino C, Mir LM. Biological

effects of ultrashort electric pulses in a neuroblastoma cell line: the energy density role. Int J Radiat Biol. 2022;98(1):109-121.

- Pacchierotti F, Ardoino L, Benassi B, **Consales C**, Cordelli E, Eleuteri P, Marino C, Sciortino M, Brinkworth MH, Chen G, McNamee JP, Wood AW, Hooijmans CR, de Vries RBM. Effects of Radiofrequency Electromagnetic Field (RF-EMF) exposure on male fertility and pregnancy and birth outcomes: Protocols for a systematic review of experimental studies in non-human mammals and in human sperm exposed in vitro. Environ Int. 2021 Dec;157:106806.
- Montano L, Ceretti E, Donato F, Bergamo P, Zani C, Viola GCV, Notari T, Pappalardo S, Zani D, Ubaldi S, Bollati V, **Consales C**, Leter G, Trifuoggi M, Amoresano A, Lorenzetti S; FASt study group. Effects of a Lifestyle Change Intervention on Semen Quality in Healthy Young Men Living in Highly Polluted Areas in Italy: The FASt Randomized Controlled Trial. Eur Urol Focus. 2021 Feb 10:S2405-4569(21)00041-9.
- **Consales C***, Butera A, Merla C, Pasquali M, Lopresto V, Pinto R, Pierdomenico M, Mancuso M, Marino C, Benassi B. Exposure of the SH-SY5Y Human Neuroblastoma Cells to 50-Hz Magnetic Field: Comparison Between Two-Dimensional (2D) and Three-Dimensional (3D) In Vitro Cultures. Mol Neurobiol. 2020 Nov 24. doi: 10.1007/s12035-020-02192-x.

BOOK CHAPTERS

Giorgia Innamorati, Barbara Benassi, **Claudia Consales*** "Electromagnetic fields redox signaling modulation in brain". CRC Book
Environmental Stressors and OxInflammatory tissue responses. 1st edition 2023

Barbara Benassi and **Claudia Consales*** "Environmental Impact on the Etiology of Alzheimer's Disease: Mechanistic Insights from Oxidative Stress and Epigenetic Perspective", Frontiers in Clinical Drug Research - Alzheimer Disorders, Chapter 5, Vol. 2, 2014.

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE:	Italian
OTHER LANGUAGES:	English

Rome, November 17h, 2025

According to Regulation (EU) 2018/1725, I hereby express my consent to process and use my data provided in this CV and application for recruiting purposes