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Nationality: Italian | **Address:** Italy (Home)

● WORK EXPERIENCE

01/08/2020 – 31/07/2023 Perugia, Italy

POSTDOCTORAL RESEARCHER UNIVERSITY OF PERUGIA - DEPARTMENT OF CHEMISTRY, BIOLOGY AND BIOTECHNOLOGY

- Silver Nanoparticles synthesis and conjugation.
- Cell line cultures (Human Glioblastoma U251, Human Ovarian Granulosa Tumour Cell COV434, Human Sertoli Cells (HSerC) and Human Adenocortical Carcinoma H295R).
- Primary human granulosa and ovarian endothelial cell extraction and cultures, Primary Human Hepitelial Prostate cell culture.
- Genomic Characterizations and Molecular biology.
- Fluorescence microscopy (Immunistochemistry, Ratiometric calcium imaging and Mitochondrial membrane potential assay).
- Projects Management.
- Lab Management.
- Students training and tutoring.

01/11/2016 – 31/10/2019 Perugia, Italy

PHD STUDENT UNIVERSITY OF PERUGIA - DEPARTMENT OF EXPERIMENTAL MEDICINE

- Silver Nanoparticles synthesis and characterization.
- Cell line cultures (Human Glioblastoma U251, GL15 and U87, Human Leukemia MEC-1, Human Müller Glia MIO-M1, Human Ovarian Granulosa Tumour Cell COV434, Human Liver Cancer Hep G2, Human Colon Carcinoma RKO, Human Cervix Carcinoma HeLa, Murine Glioblastoma GL261, Murine Embryonic Hippocampal Cells HN9.10e).
- Primary human granulosa cell extraction and cultures.
- Vitality and genotoxicity assays.
- Molecular biology.
- Fluorescence microscopy.
- Electrophysiological assays.
- Calcium Imaging.
- Mitochondrial membrane potential assay.
- Lab Management.
- Students training and tutoring

16/03/2016 – 15/09/2016 Perugia, Italy

RESEARCH ASSISTANT UNIVERSITY OF PERUGIA - DEPARTMENT OF CHEMISTRY, BIOLOGY AND BIOTECHNOLOGY

- Cell Coltures (Human mioblast)
- Electrophysiological assays
- Genotoxicity Assays
- Vitality Assays

05/11/2012 – 28/02/2015 Perugia, Italy

RESEARCH ASSISTANT GENOMICS, GENETICS AND BIOLOGY INNOVATION POLE/FUNCTIONAL GENOMICS CENTRE OF UNIVERSITY OF PERUGIA

- Library preparation for Illumina platforms.
- RNA-seq and data analisys.
- Cell culture (Human Kerationcyte, Human Melanocyte, Human Melanoma and Murine Melanoma cells).
- In vitro drug tests (cell growth and vitality, DNA damage, cell migration and invasion).
- FACS analysis for cell cycle arrest, apoptosis and cell markers detection.

- RNA Extraction and RT-PCR.
- Immunofluorescence.
- Sanger AB 3500 sequencer maintenance.
- Single-cell RNA-seq.

12/2009 – 07/2010 Perugia, Italy

GRADUATION INTERNSHIP UNIVERSITY OF PERUGIA – DEPARTMENT OF EXPERIMENTAL MEDICINE AND BIOCHEMICAL SCIENCES

- Cell culture (Human Dermal Fibroblast).
- Gene transfection.
- DNA extraction and qPCR.
- Western blotting.
- Luciferasi promoter analysis.

10/2007 – 12/2007 Perugia, Italy

GRADUATION INTERNSHIP UNIVERSITY OF PERUGIA – DEPARTMENT OF EXPERIMENTAL MEDICINE AND BIOCHEMICAL SCIENCES

- Cell culture (Human Bone Marrow Stromal Cells).
- Cell seeding on bioengineered surfaces.
- Introduction to SEM (Scanning Electron Microscope) methods.

● EDUCATION AND TRAINING

09/2008 – 07/2010 Perugia, Italy

MASTER IN CHEMICAL-INDUSTRIAL BIOTECHNOLOGIES University of Perugia

- Advanced Molecular Biology.
- Chemical Physics.
- Spettroscopy applied to Biology.
- Bio-industrial process.
- Medical biotechnologies methods and application.
- Biomaterials.

National classification 110 and honors /110

09/2004 – 02/2008 Perugia, Italy

BACHELOR IN BIOLOGICAL SCIENCE University of Perugia

- Genetics.
- Biochemistry.
- Molecular biology.
- Microbiology.
- Clinical analysis.

National classification 107 / 110

● LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2
JAPANESE	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Statistical analysis

GraphPad Prism | Originlab

Office Pack

Microsoft Office (Outlook, Excel, Word, PowerPoint)

Graphics and illustration

Adobe Photoshop | Canva

Video editing

Adobe (Adobe Photoshop, Adobe Premiere, Adobe AfterEffects, Adobe MediaEncoder, Adobe Illustrator)

3D graphics

Zbrush (Beginner) | Sketchup 3D sketching software | Unreal Engine

● **ADDITIONAL INFORMATION**

PUBLICATIONS

(In Press) **New Insights On Resveratrol Supported On Magnesium Dihydroxide (Revifast)** – 2023
Italian Journal of Food Science

[Therapeutic Targeting Potential of Novel Silver Nanoparticles Coated with Anti-CD20 Antibody against Chronic Lymphocytic Leukemia](#)

– 2023
Cancers

[\(Conference paper\) Exploring the potential energy surface of interacting pairs of Ag dimers.](#) – 2022
AIP Conference Proceedings.

[LY294002 Inhibits Intermediate Conductance Calcium-Activated Potassium \(KCa3.1\) Current in Human Glioblastoma Cells.](#)

– 2022
Frontiers in Physiology,

[\(Conference paper\) A Theoretical Study on trans-Resveratrol - Cu\(I\) Complex.](#) – 2021
Computational Science and Its Applications – ICCSA 2022 Workshops

[Resveratrol depolarizes the membrane potential in human granulosa cells and promotes mitochondrial biogenesis.](#)

– 2021
Fertility and Sterility.

[Resveratrol Supported on Magnesium Dihydroxide \(Resv@MDH\) Represents an Oral Formulation of Resveratrol With Better Gastric Absorption and Bioavailability Respect to Pure Resveratrol](#)

– 2020
Frontiers.

[Effect of 1 \$\alpha\$,25\(OH\) \$_2\$ vitamin D3 in mutant P53 glioblastoma cells: Involvement of neutral sphingomyelinase1.](#)

– 2020
Cancers.

[Focus on the use of resveratrol as an adjuvant in glioblastoma therapy](#) – 2020
Current Pharmaceutical Design.

[New Insights on KCa3.1 Channel Modulation](#) – 2020
Current Pharmaceutical Design.

(Conference paper) Synthesis and characterization of AgNPs@UiO66 as a novel nanohybrid for the treatment of glioblastoma.

– 2019
Journal of Biotechnology.

Silver ions promote blebs growth in U251 glioblastoma cell by activating nonselective cationic currents

– 2019
Scientific reports.

Solid dispersion of resveratrol supported on magnesium DiHydroxide (Resv@MDH) microparticles improves oral bioavailability

– 2019
Nutrients.

(Conference paper) Catalase prevents DNA damage and cationic current activation by silver nanoparticles in U251 human glioblastoma cell line

– 2018
Journal of Biotechnology.

Glioblastoma single-cell microRaman analysis under stress treatments – 2018

Scientific Reports.

Inhibitory effects of agmatine on monoamine oxidase (MAO) activity - Reconciling the discrepancies.

– 2018
The Eurobiotech Journal.

Anticarcinogenic activities of sulforaphane are influenced by Nerve Growth Factor in human melanoma A375 cells

– 2018
Food and Chemical Toxicology.

Antitumor activity and expression profiles of genes induced by sulforaphane in human melanoma cells

– 2017
European Journal of Nutrition.

(Conference paper) The radiosensitizer silver nanoparticles effects are prevent to ion channel blocker DIDS in U251 human glioblastoma cell line

– 2017
Journal of Biotechnology.

(Conference paper) Distinct effects of silver nanoparticles and LY294002 on KCa3.1 and Clsw currents in human glioblastoma multiforme: Implications for tumor radiotherapy.

– 2016
Journal of Biotechnology.

(Conference paper) Resveratrol-Mg hydroxide complex display enhanced bioavailability: A possible application in DM-1 disease

– 2016
Journal of Biotechnology.

Development of novel cyclic peptides as pro-apoptotic agents – 2016

European Journal of Medicinal Chemistry.

NETWORKS AND MEMBERSHIPS

Memberships Student Representative of University of Perugia, Biological Science course (2005-2007).

DRIVING LICENCE

Driving Licence: A1

Driving Licence: A

Driving Licence: B

CONFERENCES AND SEMINARS

2019

(Abstract/Poster) European Biotechnology Congress - Valencia, Spain 2019 - European Biotechnology Thematic Network Association.

2018

(Abstract/Poster) 69° Congress of Physiological Society of Italy (SIF 2018), Florence, Italy - Società Italiana di Fisiologia.

2018

(Oral Presentation) European Biotechnology Congress - Athens, Greece 2018 - European Biotechnology Thematic Network Association

2017

(Abstract/Poster) Joint Meeting of the Federation of European Physiological Societies and the Austrian Physiological Society (FEPS 2017) - The Federation of European Physiological Societies.

2017

(Abstract/Poster) European Biotechnology Congress - Dubrovnik, Croatia 2017 - European Biotechnology Thematic Network Association

2016

(Abstract/Poster) Nanotech France 2016 and Joint International Conference - Science, Engineering, Technology Conferences Organisers (SETCOR).

2016

(Abstract/Poster) European Biotechnology Congress - Riga, Latvia 2016 - European Biotechnology Thematic Network Association.

2013

"Next Generation Sequencing in microbiology" Illumina, Rome.

PROJECTS

01/07/2020

Study of the effects of pituitary and steroid hormones on human reproductive physiology

03/06/2013 – 30/11/2014

Evaluation of the effects of sulforaphane on human melanoma cells lines

ORGANISATIONAL SKILLS

Organisational skills Good ability to organize work in the lab, manage staff and PhD students, plan and execute experiments, manage a budget and orders materials and reagents.

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills Good interpersonal skills with people of different nationalities and cultures improved by:

- working closely with a number of foreign researchers in inside Genomics, Genetics and Biology Innovation Pole.
- numerous trips made in different locations around the world.

Particularly familiar with Japanese culture.

JOB-RELATED SKILLS

Laboratory skills

Expertise with:

- Cell Cultures and maintenance.
- Primary cell tissue extraction and culture.
- Molecular biology methods (DNA and RNA extraction, PCR, qPCR, RT-PCR).
- Use of Confocal Microscopy and Fluorescence Microscopy.
- Methodologies for library preparation for Illumina HiSeq 1500 (trueSeq, Nextera).

- FACSflow methods for cell cycle arrest, apoptosis detection and cell markers detection (Propidium iodide staining, Annexin V apoptosis detection assay, Caspase detection and cell immunostaining).
- Cell growth, invasion, migration and viability assays (Trypan blue assay, MTT assay, ATP quantification tests, Luminescent Cell Viability tests, LDH assay, Scratch and Wounding assay, Collagen invasion Assay and Transwell assays).
- DNA quality assays (DNA fragmentation on agarose gel, comet assay, microelectrophoresis quality tests).
- Synthesis, characterization and conjugation of silver nanoparticles with protein and antibodies.
- Bioanalyzer 2100 (Agilent) use and maintenance.
- AB 3500 Genetic Analyzer (Applied Biosystem) use and maintenance.

Experience with:

- Basic microbiology procedures (Seeding, handling, cloning and lipofectamine transfection).
- Western blotting.
- Single-cell RNA-seq (SMARTer Ultra Low RNA Kit for Illumina Sequencing (Clontech)).
- Electrophysiology procedures (Patch-Clamp).

OTHER SKILLS

Other skills

- Use of camcorders and cameras.
- Knowledge of filming and animation techniques.
- Knowledge of music and piano/guitar play.

TRAINING AND COURSES

2017

School of Physiology and Biophysics - 21st Course "The methods and limits of research in space: from cells to man" - Italian Society of Physiology

2017

"Bioinformatics for all: Genomic, Epigenomic and Transcriptomic." - Italian Society of Agricultural Genetics (SIGA)

2013 - 2014

Next Generation Sequencing Training

- Illumina Hi-Seq 1500 Training.
- AB 3500 Genome Analyzer Training.

OTHER WORK EXPERIENCE

Other work experience

- Freelance video operator and video editor.
 - Postman.
 - Librarian.
 - Carer of disabled person.
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