



# Gabriele Coppola

Home :

Email:

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Phone:

Date of birth:

Nationality: Italian

## ABOUT ME

Highly organised and multitasking Research Fellow focused on Bioinformatics and Biotechnology. Great excitement to work with huge willingness and interest in learning new things combined with excellent time management.

## WORK EXPERIENCE

[ Feb 2023 – Current ]

### Bioinformatics scientist

***Institute of Experimental Endocrinology and Oncology "Gaetano Salvatore" (IEOS), CNR***

**Address:** Via Pansini 5, 80131, Naples, Italy | **Business or sector:** Professional, scientific and technical activities

- Development of a Knowledge-based platform in **EXSCALATE, Dompé**.
- Analysis of databases and datasets for the identification of potential drug targets in diseases.
- Analysis of protein and RNA structures.
- Analysis of Transcriptomics and Proteomics data.
- Research and application of aptamer-chemotherapy combined therapy and RNA therapeutics.

[ Oct 2022 – Feb 2023 ]

### Postgraduate Trainee

***Institute of Experimental Endocrinology and Oncology "Gaetano Salvatore" (IEOS), CNR***

**Address:** Via Pansini 5, 80131, Naples, Italy | **Business or sector:** Professional, scientific and technical activities

- Research and applications in targeting the interplay between Cancer Associated Fibroblasts (CAFs) and Non-Small Cell Lung Cancer (NSCLC) cells with aptamer-miRNA/siRNA conjugates.
- Research and applications of RNA therapeutics.
- Research and applications in tumor microenvironment.
- Ex-vivo and 3D cultures.
- Computational analysis of databases for target identification and drug repurposing.
- Development of a Knowledge-based platform in **EXSCALATE, Dompé**.

[ Dec 2019 – Jul 2022 ]

### Undergraduate Trainee

***University of Naples "Federico II" - CNR IEOS***

**Address:** Via Pansini 5, 80131, Naples, Italy | **Name of unit or department:** Molecular Medicine and Medical Biotechnology | **Business or sector:** Professional, scientific and technical activities

- Research and application of nucleic acid aptamers employed as therapeutic and delivery tools in the field of molecular oncology, especially in Non-Small Cell Lung Cancer (NSCLC) cells, Cancer Associated Fibroblasts (CAFs) and Glioblastoma (GBM) stem cells.
- Research and applications in tumor microenvironment.
- Research and application of aptamer-chemotherapy combined therapy and RNA therapeutics.

- Image and data analysis.
- Database analysis.

## EDUCATION AND TRAINING

[ Dec 2022 ]

### **Biologist Professional Qualification sez. A**

**University of Sannio**

**Address:** Via Traiano 3, 82100, Benevento, Italy | **Field(s) of study:** Biology

**Principal subjects covered:** Chemistry, Biology, Genetics, Botany, Microbiology, Ecology, Nutrition, Hygiene, Anatomy, QC

[ Oct 2020 – Sep 2022 ]

### **Master's Degree in Medical Biotechnology**

**University of Naples "Federico II"**

**Address:** Via Tommaso De Amicis 95, 80131, Naples, Italy | **Field(s) of study:** Biotechnology | **Final grade:** 110/110 cum laude | **Thesis:** Inhibition of tumour cells interplay with Cancer-Associated Fibroblasts in Non-Small-Cell Lung Cancer using an aptamer conjugate silencing STAT3

**Curriculum:** Advanced Technologies (in English)

**Principal subjects covered:** Molecular Biology, Biotechnology, Cell Biology, Pharmacology, Oncology, Regenerative Medicine, Gene Therapy, Bioinformatics

[ Oct 2017 – Sep 2020 ]

### **Bachelor's Degree in Biotechnology (Biotechnologie per la Salute)**

**University of Naples "Federico II"**

**Address:** Via Tommaso De Amicis 95, 80131, Naples, Italy | **Field(s) of study:** Biotechnology | **Final grade:** 110/110 cum laude | **Thesis:** Use of the Western Blot technique for the analyses of the interplay between CAF and NSCLC cells

**Curriculum:** Medical

**Principal subjects covered:** Biology, Chemistry, Biochemistry, Genetics, Anatomy, Physiology, Histology, Microbiology, Diagnostics

[ Sep 2012 – Jul 2017 ]

### **High School Diploma in Applied Sciences**

**Scientific High School "Tito Lucrezio Caro"**

**Address:** Via Duomo 1, 84087, Sarno (SA), Italy | **Final grade:** 96/100

**Principal subjects covered:** Mathematics, Physics, Biology, Geology, Chemistry, Informatics

## CERTIFICATIONS

[ Sep 2024 ]

### **Neo4j Certified Professional**

Neo4j

[ May 2024 ]

### **Career Essentials in Generative AI**

Microsoft

[ Mar 2024 ]

### **Data Science with R**

Simplilearn

[ May 2023 ]

### **Career Essentials in Data Analysis**

Microsoft

[ Nov 2022 ]

### **Test de Connaissance du Français**

France Education International

[ Nov 2022 ] **Python**

Kaggle

[ Mar 2022 ] **B2 Cambridge Assessment English**

Cambridge Assessment

[Jun 2021 ] **Microsoft Office Specialist Excel 2016**

Microsoft

[Jun 2021 ] **Microsoft Office Specialist Word 2016**

Microsoft

[Jun 2021 ] **Microsoft Office Specialist PowerPoint 2016**

Microsoft

## LANGUAGE SKILLS

**Mother tongue(s):** Italian

**Other language(s):**

**English**

**LISTENING C1 READING C1 WRITING C1**

**SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1**

**French**

**LISTENING B2 READING B2 WRITING B1**

**SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1**

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

## DIGITAL SKILLS

### My Digital Skills

#### Microsoft Office skills

Microsoft Word | Power Query | Microsoft OneNote | Microsoft Excel | Microsoft Powerpoint

#### Programming skills

Linux (Terminal Commands, Bash/Shell) | Python Basics | Graph Databases, Cypher, Neo4j | SQL Basics | R software | Pipeline Pilot

#### Statistics skills

GraphPad | Biostatistics with R | Statistics with R

#### Organisational and Planning skills

Strategic Planning | Prioritization | Identify Alternatives | Determination | Time Management | Scheduling | Motivation

#### Analytical skills

Data Science, Data Analytics, Data Visualization | Image processing and analysis | Critical thinking | Research | Data Processing | TIBCO Spotfire | Creativity | Data Manipulation | Data Analysis | Logical Reasoning

#### Soft skills

Flexibility | Problem-solving | Adaptability | Team-work oriented | Good listener and communicator | Responsibility | Willingness to learn | Efficient multi-tasking | Decision-making | Reliability | Excitement for challenges | Decisiveness | Passion for work | Ability to Work Under Pressure

#### Communication skills

Excellent writing and verbal communication skills | Cross cultural skills | Versatility

### Bioinformatics skills

Sequence Alignment | Multiple Sequence Alignment | Bioinformatics with R | Differential Expression Analysis | Bioinformatics Databases | Ensembl Genome Browser | Pathway Analysis | Protein-Ligand docking | Mascot Proteomics Analysis | Protein, DNA, RNA interactions analysis | The Human Protein Atlas | Phylogenetic Tree Construction | Protein structure prediction | Metacore | Protein Structure Analyzing | RNA Structure Prediction | AutoDock, AutoDock Vina (basics) | Online Tool for Bioinformatics (BLAST, GeneCards, Gene Ontology, KEGG, etc.) | PandaOmics | Cytoscape | MEGA

## BIOTECHNOLOGY SKILLS

### Biochemistry and molecular biology skills

- PCR, Real-Time PCR, retrotranscription
- Western blot, immunoblotting
- ELISA, ELONA
- Acrylamide and agarose gels, gel electrophoresis
- DNA extraction, RNA extraction, protein extraction

### Cell biology skills

- Cancer and non-cancer cell culture
- Cancer stem cell culture
- Patient-derived cell culture, primary cell culture
- Cell immunofluorescence
- Cell transfection
- Cell viability assay (MTT, MTS)
- Colony assay
- Migration and invasion assay
- Coculture systems
- Wound healing assay
- Tube formation assay
- Hanging drop assay
- Spheroid cell culture
- 3D and Ex-vivo cell cultures

## COMMUNICATION AND INTERPERSONAL SKILLS

### Great social skills with the aptitude of working in a team

Great attention in collaboration and conflict resolution building a trusted relationship with other team members. Good versatility developed during university years where courses stimulate team collaborations allowing multicultural exchanges with students belonging to all parts of the world.

## HONOURS AND AWARDS

[ Mar 2023 ]

**Premio Tesi di Laurea Tonino di Pasquale** Awarding institution: Department of Molecular Medicine and Medical Biotechnology, University of Naples "Federico II"

## PUBLICATIONS

[ 2024 ]

**Directing in vitro selection towards G-quadruplex-forming aptamers for the development of efficient inhibitors of HMGB1 pathological activity**

Napolitano E, Criscuolo A, Riccardi C, Esposito CL, Catuogno S, Coppola G, Roviello GN, Montesarchio D, Musumeci D

*Angewandte Chemie*

[ 2023 ] **The Small RNA Landscape in NSCLC: Current Therapeutic Applications and Progresses**

Ciccone G, Ibba ML, Coppola G, Catuogno S, Esposito CL

*International Journal of Molecular Sciences*

[ 2023 ] **STAT3 silencing by an aptamer-based strategy hampers the crosstalk between NSCLC cells and cancer-associated fibroblasts**

Ibba ML, Ciccone G, Rotoli D, Coppola G, Fiorelli A, Catuogno S, Esposito CL

*Molecular Therapy-Nucleic Acids*

[ 2021 ] **New aptamer-based approaches for the targeting of cancer associated fibroblast in NSCLC**

Ciccone G, Ibba ML, Coppola G, Petrillo G, Catuogno S, Esposito CL

*Siberian Medical Review*

## CONFERENCES AND SEMINARS

[ Sep 2024 ] **EuroQSAR** Barcelona

Coppola G, Esposito CL, Beccari AR, Iaconis D

BioKnowLEX: An Inter-connected Platform for Discovery Biology

[ Jun 2023 ] **High-resolution spatial analysis of lung cancers reveals heterogeneity in tumor microenvironments**

SelectScience

[ May 2023 ] **AI Infra @Scale** Meta AI

[ May 2023 ] **Scaling Next-Generation Sequencing in Cancer and Drug Discovery** Tecan

[ Mar 2023 ] **Department of Molecular Medicine and Medical Biotechnology Retreat**  
University of Naples "Federico II"

[ Feb 2023 ] **V Workshop "I Chimici per le Biotechnologie"** CESTEV

[ Nov 2022 ] **3rd IBBR Memorial Workshop** IBBR

Ibba ML, Ciccone G, Coppola G, de Franciscis V, Di Ruscio A, Catuogno S, Esposito CL

Selective targeting of DNA Methylation through nucleic acid aptamers for non-small cell lung cancer therapy

[ Apr 2022 ] **Cnr-Dsb conference: Target discovery for unmet medical needs and precision/ personalized medicine**

CNR

Ibba ML, Ciccone G, Coppola G, Petrillo G, Fiorelli A, Esposito CL, Catuogno S

Targeting of Cancer associated fibroblast in NSCLC by new aptamer-based approaches

## HOBBIES AND INTERESTS

**Playing classical and electric guitar**

Pre-academic course of classical guitar, solfeggio and armonia completed from Conservatory of Music "Giuseppe Martucci", Salerno

Love playing with anyone

### Playing electric bass

Love playing with anyone

### Drawing

## Gardening