

Maria Luigia Ibba

Personal details

Email address

Phone number

Address

Date of birth

Driver's license

Gender

Donna

Nationality

Italian

Employment

02/2024- present

Assegno di Ricerca Italy ID 28703-2023 Associazione Italiana per la Ricerca sul Cancro (AIRC)

Istituto di Endocrinologia ed Oncologia Sperimentale "G. Salvatore" (CNR-IEOS), Via Pansini, 5 80131, Naples

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

Supervisor: Dr Carla Lucia Esposito.

Main activities Characterization of molecular constructs (RNA based) for the selective delivery of nucleic acids therapeutics and their functionality on cancer cells.

02/2023 - 02/2024

Assegno di Ricerca Italy ID 28075-2022 Associazione Italiana per la Ricerca sul Cancro (AIRC)

Istituto di Endocrinologia ed Oncologia Sperimentale "G. Salvatore" (CNR-IEOS), Via Pansini, 5 80131, Naples

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07/2022 - 01/2023

Fellowship RISE - cONCReTE - DevelOpmeNt of Cancer RNA TherapEutics (G.A. 872391)

Istituto di Endocrinologia ed Oncologia Sperimentale "G. Salvatore" (CNR-IEOS), Naples, Via Pansini, 5 80131

Main activities Characterization of molecular constructs (RNA based) for the selective delivery of nucleic acids therapeutics and their functionality on cancer cells.

Supervisor: Dr Carla Lucia Esposito.

Business or sector Research in molecular oncology and molecular biology.

07/2021 - 06/2022

Fellowship (rif 4/2021)

I consent to the processing of my personal data for the purpose of recruitment for the position to which I am applying.

This resume is made with CVwizard.com.

University of Naples Federico II, Naples

Main activities and responsibilities: Development of a functional screening to identify a unique biomarker based upon aptamers will be employed as high affinity ligands and potential antagonists of disease-associated proteins.

Supervisor: Prof.ssa Gerolama Condorelli

Business or sector Research in molecular oncology and molecular biology

I consent to the processing of my personal data for the purpose of recruitment for the position to which I am applying.

This resume is made with CVwizard.com.

07/2020 - 06/2021	Fellowship PRISAR2 - Proactive monitoring of cancer as an Alternative to surgery 2" (REF.GA June 2021 872860) (rif 6/2020) University of Naples Federico II, Naples. Host institution for secondment: LUMC, Albinusdreef 2, 2333 ZA Leiden, Netherlands. Supervisor: Prof.ssa Gerolama Condorelli Main activities and responsibilities: Development of a functional screening to identify a unique biomarker based upon aptamers will be employed as high affinity ligands and potential antagonists of disease-associated proteins. Business or sector Research in molecular oncology and molecular biology
02/2020 - 05/2020	Collaboration contract (Fondazione Buzzati Traverso) Istituto di Endocrinologia ed Oncologia Sperimentale "G. Salvatore" (CNR-IEOS), Via Pansini, 5 80131, Naples Main activities and responsibilities: Characterization of nucleic acid aptamers as tools for therapy and targeted delivery of RNA-based therapeutics in cancer. Supervisor: Dr Carla Lucia Esposito. Business or sector Research in molecular oncology and molecular biology
10/2019 - 01/2020	Post graduate internship Istituto di Endocrinologia ed Oncologia Sperimentale "G. Salvatore" (CNR-IEOS), Naples, via Pansini 5, 80131 Main activities and responsibilities: Characterization of nucleic acid aptamers as tools for therapy and targeted delivery of RNA-based therapeutics in cancer. Supervisor: Dr Carla Lucia Esposito. Business or sector Research in molecular oncology and molecular biology
10/2017 - 09/2019	Undergraduate trainee Istituto di Endocrinologia ed Oncologia Sperimentale "G. Salvatore" (CNR-IEOS), Naples, via Pansini 5, 80131 Main activities and responsibilities: Characterization of nucleic acid aptamers as tools for therapy and targeted delivery of RNA-based therapeutics in cancer. Supervisor: Dr. Vittorio de Franciscis Business or sector Oncology and Molecular biology

Education

11/2021 - 12/2024

PhD in Biochemical and Biotechnological Sciences

University of Campania Luigi Vanvitelli, Naples

Principal subjects covered: Biology, Biochemistry and Medical Biotechnology

10/2016 - 09/2019

Master's Degree in Biotechnology

University of Naples "Federico II", Naples

Principal subjects covered: Biotechnology, Molecular Biology, Chemistry, Cellular Biology.

Thesis: Characterization of a novel aptamers against Dna methyltransferase. (Internal supervisor G. Condorelli)

10/2011 - 03/2016

Bachelor's Degree in Biotechnology

University of Naples "Federico II", Naples

Training organization's name: "Centro di Biotechnologie A.O.R.N. Cardarelli "

Principal subjects covered: Biotechnology, Molecular Biology, Chemistry, Cellular Biology, Biochemistry, Genetic

Thesis: La linea cellulare VX2: condizioni di coltura e test di tumorigenicità in vivo.

09/2006 - 07/2011

Scientific High School

"Liceo scientifico Margherita Di Savoia", Naples

Principal subjects covered: Mathematic, Physic, Biology, Chemistry.

Skills

database	Very good
informatics	Very good
office suite	Excellent
presentation software	Very good
word processor	Excellent
adaptability	Excellent
versatility	Excellent
determination	Excellent
Problem solving	Excellent

Languages

English	Very good
Italian	Fluent
Spanish	Moderate

Qualities

- **Technical Skills:** Eukaryotic cell culture (stable cell lines, primary cultures and cancer stem cells), stable and transient transfection, infection; Molecular biology techniques (RNA extraction and purification, PCR, qRT-PCR, Transcription, RIP); Signal transduction and Protein analyses (WB, Immunoprecipitation); Cell migration and invasion assay; Flow cytometry; Cell viability (MTT, XTT) assays; Clonogenic assays; RNAi (si/shRNA, miRNA) screens; Tumor xenograft and tissue lysis; Bacterial cell culture and cloning techniques. Oligonucleotide florescent, radio-labeling and immunofluorescence; Microarray analyses; Combinatorial chemistry for aptamer selection.
- **Communication skills:** Excellent verbal and written communication and aptitude to work in group developed during university and training experience. Good adaptability and communicative versatility.
- **Organisational / managerial skills:** Great capacities of organization and management of research studies. Passion and excitement for research work. Excellent prioritisation skills and ability to reach the proposed aims with ambition and determination.
- **Good command of Bio-informatics analyses:** sequence analyses and alignment (ClustalW, Treeviewer), RNA/DNA secondary structure prediction software (RNAstructure, DNAsis), array analyses software (TmeV); MicroRNA database and prediction algorithm (miRBase, MiRanda, TargetScan, PicTar).
- **Excellent command of office suite (word processor, spread sheet, presentation software)**

Participation in scientific conferences

- January, 2025 6th CRCL International Cancer Symposium, January 29-31, 2025, Lyon- France .
- November 2023 Conference 4th Memorial Workshop Maria Ciaramella, NA1 Research Area of the CNR Via Pietro Castellino 111 Naples – Italy
- November 2022 Conference 3th Memorial Workshop Maria Ciaramella, NA1 Research Area of the CNR Via Pietro Castellino 111 Naples – Italy
- May 2018 Conference: New application for Glioblastoma treatment, Naples
- October 2017 Conference on Down Syndrome: from therapy to diagnosis, Naples

Publications

- Esposito CL, Autiero I, Li H, Bassal MA, Sandomenico A, Ibba ML, Wang D, Rinaldi L, Ummano S, Gaggi G, Borchiellini M; Swiderski P, Ruvo M, Catuogno S, Ebraldize AK, Kortylewski M, de Franciscis V, Di Ruscio A. Targeted systematic evolution of an RNA platform neutralizing DNMT1 function and controlling DNA methylation. *Nat Commun.* 2023 Jan 6;14(1):99. doi: 10.1038/s41467-022-35222-4. PMID: 36609400; PMCID: PMC9823104.
- Maria Luigia Ibba; Giuseppe Ciccone; Gabriele Coppola; Deborah Rotoli; Alfonso Fiorelli; Silvia Catuogno; Carla Lucia Esposito. STAT3 silencing by an aptamer-based strategy hampers the crosstalk between NSCLC cells and cancer-associated fibroblasts. *2023 Mar 10;32:111-126.* doi: 10.1016/j.omtn.2023.03.003. PMID: 37020682; PMCID: PMC10068014.
- Ciccone G, Ibba ML*, Coppola G, Catuogno S, Esposito CL. The Small RNA Landscape in NSCLC: Current Therapeutic Applications and Progresses. *Int J Mol Sci.* 2023 Mar 24;24(7):6121. doi: 10.3390/ijms24076121. PMID: 37047090; PMCID: PMC10093969.* co-first author
- Nuzzo S, Iaboni M, Ibba ML, Rienzo A, Franzese M, Roscigno G, Affinito A, Petrillo G, Quintavalle C, Ciccone G, Esposito CL and Catuogno S. Selection of RNA aptamers targeting hypoxia in cancer. *Frontiers in Molecular Biosciences Molecular Diagnostics and Therapeutics Volume 9 – 2022*, <https://doi.org/10.3389/fmolb.2022.956935>.
- Ibba ML. *, Ciccone G. *, Esposito CL., Catuogno S., Giangrande Paloma H., Advances in mRNA non-viral delivery approaches, *Advanced Drug Delivery Reviews*, Volume 177, 2021, 113930, DOI: 10.1016/j.addr.2021.113930. [* MLI AND GC equally contributed.]
- Esposito CL, Nuzzo S, Ibba ML, Condorelli G, Catuogno S, de Franciscis V. Combined Targeting of Glioblastoma Stem-Like Cells by Neutralizing RNA-Bio-Drugs for STAT3 Aptamer-STAT3 RNA bio- drug as tool to eradicate glioblastoma stem-like cells. *Cancers* 2020, 12, 1434; doi:10.3390/cancers12061434
- Santana-Viera L*, Ibba ML*, Rotoli D*, Catuogno S, and Esposito CL. Emerging Therapeutic RNAs for the Targeting of Cancer Associated Fibroblasts. *Cancers* 2020, 12, 1365; doi:10.3390/cancers12061365. [*LSV, MLI and DR equally contributed]
- Rotoli D, Santana-Viera L, Ibba ML, Esposito CL, and Catuogno S. Advances in Oligonucleotide Aptamers for NSCLC Targeting. *Int. J. Mol. Sci.* 2020, 21, 6075; doi:10.3390/ijms21176075

Meeting Abstract

- Ibba ML , Ciccone G. , Coppola G. , Cennamo F. , Di Vito A. , Di Ruscio A. , Catuogno S. ,Esposito C.L. An aptamer-based strategy to specifically correct aberrant DNA methylation in non-small-cell lung cancer. 6th CRCL International Cancer Symposium, January 29-31, 2025, Lyon. Presentation of poster.
- Ibba ML, Coppola G, Li H, Rotoli D, Ciccone G, Cennamo F, Fiorelli A, di Ruscio A, Catuogno S, Esposito CL Aptamer-based therapeutics targeting DNA methylation in non-small-cell lung cancer Joint Seminar "Digital medicines at the intersection of sciences", 28 May 2024.
- G. Ciccone, M.L. Ibba, G. Coppola, F. Cennamo, C.L. Esposito, S. Catuogno. Isolation of new aptamers for the specific targeting of NSCLC CAFs 14rd IBBR Memorial Workshop November 16-17, 2023. Presentation of poster.
- Maria Luigia IBBA IEOS - CNR: Novel aptamer-based strategy to specifically treat DNA methylation in NSCLC. 4rd IBBR Memorial Workshop November 16-17, 2023.Oral presentation.
- 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. Presentation of poster. 3rd IBBR Memorial Workshop November 10-11, 2022.
- Ibba ML et al. Aptamer-Based Rna-Bio-Drugs For The Combined Therapy Of Gbm. Digital medicines at the intersection of sciences May, 30 2022 (on line). Presentation of poster.
- 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. "Target discovery for unmet medical needs and precision/personalized medicine". 4 April 2022 (online). [*IML and CG equally contributed]
- Esposito CL, Nuzzo S, Ibba ML, Grinev IP, Gorbushin A, Grek D, Voronkovskii I, Kolovskaya OS, Zamay TN, Morozov E, Koshmanova A, Narodov AA, Khorzhevskii VA, Erakhtin EE, Krat AV, Yakovlev A, Shesternya PA, Kichkailo AS, Condorelli G, Catuogno S, de Franciscis V. STAT3 targeting by an aptamer-based conjugate for glioblastoma multiforme therapy. Siberian Medical Review. 2021; (2):72-73. DOI: 10.20333/2500136-2021-2-72-73
- Ciccone G, Ibba ML, Coppola G, Petrillo G, Catuogno S, Esposito CL. New aptamer-based approaches for the targeting of cancer associated fibroblast in NSCLC. Siberian Medical Review. 2021; (2):83. DOI: 10.20333/2500136-2021-2-83.
- De Franciscis V., Catuogno S., Ibba M.L., Condorelli G., Esposito C.L. A two aptamer-based selective targeting of GBM with therapeutic RNAs. (20AP) Delivery of Nucleic Acid Therapeutics March 15-20, 2020, Siracusa, Sicily, Italy. Abstract accepted for the meeting. Deleted due to Covid- 19.
- Esposito C.L., Catuogno S., Ibba M.L., Condorelli G., de Franciscis V. Targeting cancer cells with nucleic acid aptamers. Workshop: Towards Novel Anticancer Strategies: It's Time to Build a New Research Community. 18th November 2019, Naples, Italy.