Resume

Personal details

Name	Maria Luigia Ibba
Email address	
Phone number	
Address	
Date of birth	
Driver's license	
Gender	
Nationality	

Employment

02/2023 - Present

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
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 selectivedelivery of nucleic acids therapeutics and their functionality on cancer cells.

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 selectivedelivery 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)
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

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07/2020 - 06/2021	**Fellowship PRISAR2 - Proactive monitoRIng of cancer aS AnalteRnative to surgery 2" (REF.GA June 2021 872860) (rif 6/2020)** University of Naples Federico II, Naples. Host institution for secodment: Percuros B.V. Zernikedreef 8, 2333 CL 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 BuzzatTraverso)** 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-basedm 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

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- • 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 fi broblast 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.

NAPOLI, 01/02/2024

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- May 2018 Conference: New application for Gioblastoma 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, Ummarino S, Gaggi G, Borchiellini M; Swiderski P, Ruvo M, Catuogno S ,Ebralidze 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 eaqually contributed]
- Rotoli D, Santana-Viera L, Ibba ML, Esposito CL, and Catuogno S. Advances in Oligonucleotide Aptamersfor NSCLC Targeting. Int. J. Mol. Sci. 2020, 21, 6075; doi:10.3390/ijms21176075

Meeting Abstract

- • 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]

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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 proposedaims 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

- 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

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Education

11/2021 - Present

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 Biotecnologie 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.

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