Sabrina Carrella, PhD

Date of Birth: 25-03-1985

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Current position:
Tenured Researcher III level; 1/12/2021-present

Current affiliation:
Ecosustainable Marine Biotechnology Department, Stazione Zoologica Anton Dohrn, Naples (Italy)

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
University of the Study of Naples Federico II, Naples, Italy	MS	07/2008	Molecular Biology
University of the Study of Naples Federico II, Naples, Italy	PhD	12/2012	Molecular Medicine
Telethon Institute of Genetics and Medicine (TIGEM), Pozzuoli (NA) and University of Campania Luigi Vanvitelli, Naples, Italy	Postdoctoral Associate Researcher	2013-2021	Molecular Medicine
Stazione Zoologica Anton Dohrn, Naples, Italy	Tenured Researcher	2021-present	Marine Biotechnology

National scientific qualification (Abilitazione Scientifica Nazionale) to function as associate professor in Applied Biology (05/F1) in ItalianUniversities, from December 2023 to December 2034.

CURRENT POSITIONS

Tenured Researcher III level; 1/12/2021-present
Ecosustainable Marine Biotechnology Department, Stazione Zoologica Anton Dohrn, Napoli (Italy)

Coordinator of the SZN PhD Program, 13/10/2023-present

Principal Investigator;
- In the project "Mitochondrial Dynamic Modulators from the Seas". Italian Ministry of University and Research (MUR). Founding period: 14/10/2023-13/10/2025
- In the project "OxymiRs modulation as gene-independent therapeutic approach in rare mitochondrial diseases." AFM-Telethon. Founding period: 10/10/2023- 10/4/2025

Director of the Studies;
- for Gabriele De Falco, PhD program Open University-SZN, Naples (Italy). "MicroRNAs-mediated environmental adaptation in marine microalgae: from physiological responses to biotechnology applications". SZN-OU PhD Fellowship. Funding period: 1/10/2022-30/9/2025

Co- Principal Investigator;
- In the project "Development of an innovative combinatorial therapy to tackle age-related macular degeneration". Italian Ministry of University and Research (MUR). Founding period: 1/12/2023-30/11/2025

FUNDINGS

Ongoing:

- "MicroRNAs-mediated environmental adaptation in marine microalgae: from physiological responses to biotechnology applications". SZN-OU PhD Fellowship. Funding period: 1/10/2022-30/9/2025 (Role: Director of the Studies)
- Italian Ministry of University and Research (MUR). Projects of Relevant National Interest (PRIN) 2022. "Mitochondrial Dynamic Modulators from the Seas". (Role: Principal Investigator)
- AFM-Telethon (Trampoline grant) 2023. "OxymiRs modulation as gene-independent therapeutic approach in rare mitochondrial diseases." (Role: Principal Investigator)
- Italian Ministry of University and Research (MUR). Projects of Relevant National Interest (PRIN)-PNRR 2022. "Development of an innovative combinatorial therapy to tackle age-related macular degeneration". (Role: Co- Principal Investigator)

Completed:

- "AAV-Sponge-mediated modulation of microRNA-181a/b: a potential therapeutic approach for Inherited Retinal Disease." Foundation Fighting Blindness. Funding period: 1/6/19-31/5/22. Role: Participant
- "miR-181a/b modulation as potential therapeutic approach for AMD treatment" BrightFocus Foundation. Funding period: 1/11/20-31/10/22. Role: Principal Investigator
- "MicroRNA expression modulation: a new therapeutic avenue for Inherited Retinal Diseases" Velux Stiftung Foundation. Funding period: 1/11/20-31/10/23. Role: Co-Principal Investigator
- "CRISPR/Cas9 microRNAs Editing as gene-independent therapeutic approach in Inherited Retinal Dystrophies (IRDs)" AFM-Telethon Trampoline grant. Funding period: 1/12/20-30/11/21. Role: Principal Investigator

PREVIOUS RESEARCH ACTIVITY

1/11/20-31/10/22 Principal Investigator

- In the project "miR-181a/b modulation as potential therapeutic approach for AMD treatment" BrightFocus Foundation. Founding period: 1/11/20-31/10/22
- In the project "CRISPR/Cas9 microRNAs Editing as gene-independent therapeutic approach in Inherited Retinal Dystrophies (IRDs)" AFM-Telethon Trampoline grant. Founding period: 1/12/20-30/04/22

1/11/20-31/10/23 Co-Principal Investigator

- In the project "MicroRNA expression modulation: a new therapeutic avenue for Inherited Retinal Diseases". Velux Stiftung Foundation.

1/12/2020-30/11/2021 Post-doctoral Fellow in the project "AAV-Sponge-mediated modulation of microRNA-181a/b: a potential therapeutic approach for Inherited Retinal Disease." Foundation Fighting Blindness at TIGEM (Telethon Institute of Genetics and Medicine), Naples (Italy)

01/12/2019–30/11/2020 Research associate University of Campania "Luigi Vanvitelli" and TIGEM (Telethon Institute of Genetics and Medicine), Naples (Italy)
Project: "Valutazione del possibile ruolo terapeutico di microRNA in malattie retiniche ereditarie e in altre forme di neurodegenerazione" ("Evaluation of the possible therapeutic role of microRNAs in inherited retina diseases and other neurodegenerative diseases")

01/11/2015–15/11/2019 Research associate University of Campania "Luigi Vanvitelli" and TIGEM (Telethon Institute of Genetics and Medicine), Naples (Italy)
Project: "Approcci preclinici di terapia genica avanzata per le distrofie retiniche ereditarie (IRD)" ("Preclinical approaches of advanced gene therpay for inherited retina dystrophies (IRD)")

01/01/2015–31/10/2015 Post-doctoral Fellow TIGEM (Telethon Institute of Genetics and Medicine), Naples

01/01/2013–31/12/2014 Post-doctoral Fellow TIGEM (Telethon Institute of Genetics and Medicine) and MIUR (Ministero dell'Istruzione e dell'Università e della Ricerca), Naples (Italy) "Ricercatore in Biologia molecolare e cellulare" ("Molecular and cellular biology researcher") in the PONa3_00311 project

01/01/2009–31/12/2012 Ph.D. in Molecular Medicine TIGEM (Telethon Institute of Genetics and Medicine) and University of Naples FedericoII (SEMM: European School of Molecular Medicine), Naples (Italy) "Study of the functional role of microRNAs in the regulatory networks underlying vertebrate eye development"
Prof. Banfi S (Tutor), Prof. Simeone A (Internal Co-Tutor), Prof. Bovolenta P (External Co-Tutor)

EDUCATION

2013 Ph.D. in Molecular Medicine University of Naples Federico II (SEMM: European School of Molecular Medicine), Naples (Italy) "Study of the functional role of microRNAs in the regulatory networks underlying vertebrate eye development"
Thesis discussion: 21-3-2013
Committee: Prof. Alberto Auricchio, University of Naples Federico II,Naples, Prof. Massimiliano Andreazzoli, University of Pisa, Dott. Stephane Ansieau, Université Claude Bernard Lyon
Passed with merits

2006–2008 Master of Science (M.Sc.) degree in Biology (biomolecular curriculum) University of Naples Federico II, Naples (Italy) Experimental thesis work: "Study of the Role of the miR-204 in the eye development"
Prof. Maria Furia; Prof. Sandro Banfi
date: 17-7-2008
110/110 with merits and mention

2003–2006 Bachelor degree in General and Applicated Biology (biomolecular curriculum) University of Naples Federico II, Naples (Italy) Experimental thesis work: "Spinofilin/ Neurabin II effect on the intracellular levels of the human oncosuppressor p14ARF"
Prof. Girolama La Mantia
date: 20-7-2006
110/110 with merits

SUPERVISOR AND TRAINING ACTIVITIES

2012-2013: training activity for Dr Ylenia D'Agostino, Master Degree in Biology, University of Naples Federico II, Naples (Italy)
2015-2017: training activity for Dr Ludovica Ciampi, Master Degree in Medical Biotechnology, University of Naples Federico II, Naples (Italy)
2017-2018: training activity for Dr Davide Piccolo, Master Degree in Biology, University of Naples Federico II, Naples (Italy)
2021-2022: thesis tutor and training activity for Dr Eva Cipollaro, Master Degree in Genetics and Molecular Biology, Sapienza University, Rome (Italy)
2021-2022: training and supervisor activity for Dr Marta Molinari, pre-doctoral fellow in the project "miR-181a/b modulation as potential therapeutic approach for AMD treatment" (BrightFocus Foundation)
2021-2022: training and supervisor activity for Dr Paola Quadrano, pre-doctoral fellow in the project "CRISPR/Cas9 microRNAs Editing as gene-independent therapeutic approach in Inherited Retinal Dystrophies (IRDs)" (AFM-Telethon Trampoline)
2020-2021: training and supervisor activity for Dr Irene Guadagnino, postdoc in the project "MicroRNA expression modulation: a new therapeutic avenue for Inherited Retinal Diseases" (Velux Stiftung Foundation)
2020-2022: training and supervisor activity for Dr Simona Brillante, postdoc in the project "miR-181a/b modulation as potential therapeutic approach for AMD treatment" (BrightFocus Foundation)
2021: training activity for Dr Dalila Capasso, PhD program in "Genomic and Experimental Medicine", Scuola Superiore Meridionale, Naples (Italy)
2019-2023: training and co-tutor activity for Dr Georgios Petrogiannakis, PhD program in "Molecular Life Science-Human Genetics", University of Campania "Luigi Vanvitelli" and TIGEM (Telethon Institute of Genetics and Medicine), Naples (Italy)
2020-2023: External member of the thesis committee in the PhD program at Centre for Genomic Regulation (CRG) in Barcelona. Student name: Dr Ludovica Ciampi, Title of the thesis project: "MIRAS: bringing the MIcroexons Retina-specific Alternative Splicing program to light"
2020-2023: training and co-tutor activity for Dr Martina Di Guida, PhD program in "Scienze Biomolecolari", University of Campania "Luigi Vanvitelli" and TIGEM (Telethon Institute of Genetics and Medicine), Naples (Italy)
2022: Internship Tutor for Alessia Riccardi, Stazione Zoologica Anton Dohrn

2022-present: Director of the Studies and supervisor for Gabriele De Falco, PhD program Open University-SZN, Naples (Italy)

2020, 2021: Lecturer for the specialistic course "miRNAs in mitochondrial diseases" of second year in the PhD program at TIGEM (SEMM-European School of Molecular Medicine, Genomic and Experimental Medicine, Federico II, Vanvitelli and OPEN University)
2021: Lecturer in the Research Training workshop as part of an "Innovative Training Network" grant. Title of the course: "Implementation of Novel Therapies for IRD"
2022, 2023: Lecturer in the course "Marine Genomics – Module of Marine Genomics" at Federico II University. Title of the lesson: "non-coding RNAs in marine organisms"

AWARDS

January 2009: Winner of Four-Year Fellowship from Scuola Europea di Medicina Molecolare (SEMM)
March 2010: Winner of "Graziella Persico Travel Award"
Institute of Genetics and Biophysics "A. Buzzati-Traverso" – CNR Naples
June 2010: Winner of "ESHG Young Investigator Award"
Scientific Programme Committee at European Human Genetics Conference 2010
January 2013: Winner of Two-Year Fellowship as "Ricercatore in Biologia molecolare e cellulare" in the PONa3_00311 project (Ministero dell'Istruzione e dell'Università e della Ricerca)
November 2015: Winner of Research Associate Fellowship in the contex of the project "Approcci preclinici di terapia genica avanzata per le distrofie retiniche ereditarie (IRD)" (University of Campania "Luigi Vanvitelli")
December 2019: Winner of Research Associate Fellowship in the project ""Valutazione del possibile ruolo terapeutico di microRNA in malattie retiniche ereditarie e in altre forme di neurodegenerazione" (University of Campania "Luigi Vanvitelli")

OTHER

- Patent: "mir-181 inhibitors and uses thereof" (WO/2019/202162) 20th of April, 2018
- Reviewer activity: Molecular Therapy, Frontiers in Marine Science, Biotechnology Advances, MDPI (International Journal of Molecular Science, Genes, Pharmaceuticals and Cells), Inflammation Research and European Journal of Neuroscience
- Topic Editor: Research Topic "Rare and common neurodegenerative retinal diseases: from molecular mechanisms to the identification of novel mutation-independent therapeutic strategies". Frontiers In Aging Neuroscience
- Coordinator of the SZN PhD Program (Decreto del Presidente n. 141/2023 del 13/10/2023)
- External member of the thesis committee in the PhD program at Centre for Genomic Regulation (CRG) in Barcelona. Student name: Dr Ludovica Ciampi, Title of the thesis project: "MIRAS: bringing the MIcroexons Retina-specific Alternative Splicing program to light"
- Member of the examining commission for the public competition number IRGB/AR/002/2021MI; Project: SAC.AD002.020.031, and for the public competition number IRGB/AR/008/2022MI; Project: PRIN 2020 2020XBCMHJ - CUP B49I22000550006; at IRGB- Istituto di Ricerca Genetica e Biomedica (CNR)
- Member of the Techincal-Scientific Commeette of the Marine Library of Stazione Zoologica Anton Dohrn (Decreto del Presidente n. 16 del 18.02.2022)
- Member of the Commission for the evaluation of PhD candidates for the XXIV cycle of the PhD Open University program - Zoological Station (Decreto del Presidente n. 62 del 10.06.2022)
- Scientific Member of Organismo per il Benessere Animale (OPBA) TIGEM for the retrospective evaluation of the research project7B56B.0 (Aut. Min n. n° 598/2017-PR del 24/7/2017) "Generazione di modelli di malattie metaboliche ereditarie nel Medaka fish" (resp. prof. Nicola Pierri-Brunetti)
- Member of the Commission for the evaluation of projects and of PhD candidates for the XXV cycle of the PhD Open University program - Zoological Station and for the XXXIX cycle of doctoral programs in agreement with other universities (Decreto del Presidente n. 67/2023 del 29/03/2023)
- Secretary of the public competition 15/2022, published in the Official Gazette of the Italian Republic IV special series n. 65 of 16 August 2022 (Decreto del Presidente n. 49/2023 del 22/02/2023)
- Internal examiner member of research degree student Miss Martina Blasio (Student number: l1892958) Thesis title: Production and Biosynthesis of Secondary Metabolites from Nannochloropsis Oceanica (Eustigmatophyceae). Supervisors: Dr Sergio Balzano, Dr Christophe Brunet and Prof Stefan Schouten
- Dissemination activities: From 2014 to 2019, Scientific dissemination at TIGEM laboratories to schools and/or to civil society; December 5th 2015, Partecipation at "Il non vedente del terzo millennio" Convention, Naples, Italy; December 21st 2018, Scientific dissemination about Retinitis Pigmentosa at "Uno Mattina", Studi Rai, Rome, Italy; Scientific dissemination at SZN laboratories at Molosiglio to schools, Futuro Remoto 2023, Città della Scienza

- 2019-2020: Member of Association for research Vision and Ophtalmology (ARVO)
- 2015-2016: Member of American Society of Cell Biology
- June-October 2016: Maternity leave
- January-June 2019: Maternity leave

MAJOR COLLABORATIONS

Alessia Indrieri, TIGEM, Pozzuoli, Italy. Projects: "miR-181a/b in optic neuropathies"; "miR-181a/b modulation as potential therapeutic approach for AMD treatment"

Sandro Banfi, TIGEM, Pozzuoli, Italy. Projects: "AAV-Sponge-mediated modulation of microRNA-181a/b: a potential therapeutic approach for Inherited Retinal Disease."; "MicroRNA expression modulation: a new therapeutic avenue for Inherited Retinal Diseases"; "Systematic search for microRNAs that play a role in photoreceptor degeneration"

Chiara Lauritano, Stazione Zoologica Anthon Dohrn, Italy. Project: "MicroRNAs-mediated environmental adaptation in marine microalgae: from physiological responses to biotechnology applications"

Pietro Tedesco, Stazione Zoologica Anthon Dohrn, Italy. Analysis of marine lassopeptides effects on human cancer cell lines.

Donatella de Pascale and Gerardo Della Sala, Stazione Zoologica Anthon Dohrn, Italy. Collaboration in the context of the PRIN 2022 project "MITOSEAs"

MariaVittoria Modica, Stazione Zoologica Anthon Dohrn, Italy. Collaboration in the context of the PRIN 2022 PNRR project "TRADE"

PUBBLICATIONS

1. Conte I, **Carrella S**, Avellino R, Karali M, Marco-Ferreres R, Bovolenta P, Banfi S. (2010) "miR-204 is required for lens and retinal development via Meis2 targeting." Proc Natl Acad Sci U S A 107: 15491-15496 (2022-2023 Journal's Impact IF = 12.779)
2. R. Avellino, **S. Carrella**, M. Pirozzi, M. Risolino, Salierno FG, P. Franco, P. Stoppelli, P. Verde, S. Banfi, I.Conte (2013) "miR-204 targeting of Ankrd13A controls both mesenchymal neural crest and lens cell migration" PLoS One 8: e61099 (2022-2023 Journal's Impact IF = 3.7)
3. Poulter JA, Al-Araimi M, Conte I, van Genderen MM, Sheridan E, Carr IM, Parry DA, Shires M, **Carrella S**, Bradbury J, Khan K, Lakeman P, Sergouniotis PI, Webster AR, Moore AT, Pal B, Mohamed MD, Venkataramana A, Ramprasad V, Shetty R, Saktivel M, Kumaramanickavel G, Tan A, Mackey DA, Hewitt AW, Banfi S, Ali M, Inglehearn CF, Toomes C. (2013) "Recessive Mutations in SLC38A8 Cause Foveal Hypoplasia and Optic Nerve Misrouting without Albinism."Am J Hum Genet 93: 1143-1150 15496 (2022-2023 Journal's Impact IF = 11.043)
4. Ivan Conte, Stefania Merella, Jose Manuel Garcia Manteiga, Chiara Migliore, Dejan Lazarevic, **Sabrina Carrella**, Raquel Marco-Ferreres, Raffaella Avellino, Davidson Nathan Paul, Warren Emmett, Remo Sanges, Nicholas Bockett, David Van Heel, Germana Meroni, Paola Bovolenta, Sandro Banfi, Elia Stupka. (2014) "The combination of transcriptomics and informatics identifies pathways targetted by miR-204 during neurogenesis and axon guidance". Nucleic Acids Res 42: 7793-7806. 15496 (2022-2023 Journal's Impact IF = 19.16)
5. **Sabrina Carrella**, Ylenia D'Agostino, Sara Barbato, Sabina P. Huber-Reggi, Francesco Giuseppe Salierno, Anna Manfredi, Stephan C.F. Neuhauss, Sandro Banfi, Ivan Conte (2015). "miR-181a/b control the assembly of visual circuitry by regulating retinal axon specification and growth". Dev Neurobiol 75: 1252-1267. (2022-2023 Journal's Impact IF =3.10)
6. Ivan Conte, Kristen D Hadfield, Sara Barbato, **Sabrina Carrella**, Mariateresa Pizzo, Louise F Porter, Sofie Hateley, James O'Sullivan, Forbes Manson, Stephan C.F. Neuhauss, Sandro Banfi, Graeme C M Black (2015). "MiR-204 is responsible for inherited retinal dystrophy associated with ocular coloboma". Proc Natl Acad Sci U S A 112: E3236-3245. (2022-2023 Journal's Impact IF = 12.779)
7. **Sabrina Carrella**, Sara Barbato, Ylenia D'Agostino, Francesco Giuseppe Salierno, Anna Manfredi, Sandro Banfi, Ivan Conte (2015). "TGF-β controls miR-181/ERK regulatory network during retinal axon specification and growth." PlosOne 10(12):e0144129. (2022-2023 Journal's Impact IF = 3.7)
8. Alessia Indrieri†, **Sabrina Carrella†,** Alessia Romano, Alessandra Spaziano, Elena Marrocco, Erika Fernandez-Vizarra, Sara Barbato, Mariateresa Pizzo, Yulia Ezhova, Francesca M. Golia, Ludovica Ciampi, Roberta Tammaro, Jorge Henao-Mejia, Adam Williams, Richard A. Flavell, Elvira De Leonibus, Massimo Zeviani, Enrico M. Surace, Sandro Banfi*, Brunella Franco*. "miR-181a/b downregulation exerts a protective action on Mitochondrial Disease models". EMBO Molecular Medicine, 2019 † co-first authors; *co-corresponding authors (2022-2023 Journal's Impact IF = 14)
9. Alessia Indrieri, **Sabrina Carrella**, Pietro Carotenuto, Sandro Banfi and Brunella Franco. "The Pervasive Role of the miR-181 Family in Development, Neurodegeneration, and Cancer." Int J Mol Sci. 2020 (2022-2023 Journal's Impact IF =5.6)

10. **Sabrina Carrella*,** Alessia Indrieri, Brunella Franco, Sandro Banfi*. "Mutation-Independent Therapies for Retinal Diseases: Focus on Gene-Based Approaches". Front Neurosci. 2020 *co-corresponding authors (2022-2023 Journal's Impact IF = 4.3)
11. **Sabrina Carrella*,** Sandro Banfi*, Marianthi Karali *. "Sophisticated gene regulation for a complex physiological system: the role of non-coding RNAs in photoreceptor cells". Front Cell Dev Biol. 2021 *co-corresponding authors (2022-2023 Journal's Impact IF = 6.08)
12. Anna Barbato, Antonella Iuliano, Mariagrazia Volpe, Romina D'Alterio, Simona Brillante, Filomena Massa, Rossella De Cegli, **Sabrina Carrella**, Massimiliano Salati, Annapina Russo, Giulia Russo, Sara Riccardo, Davide Cacchiarelli, Mariaelena Capone, Gabriele Madonna, Paolo A. Ascierto, Brunella Franco, Alessia Indrieri and Pietro Carotenuto. "Integrated Genomics Identifies miR-181/TFAM Pathway as a Critical Driver of Drug-resistance in Melanoma" Int. J. Mol. Sci. 2021 (2022-2023 Journal's Impact IF =5.6)
13. **Sabrina Carrella*,** Filomena Massa, Alessia Indrieri*. "microRNAs in mitochondrial-related eye diseases" Front Cell Dev Biol. 2021 *co-corresponding authors (2022-2023 Journal's Impact IF =6.08)
14. Brillante S, Galasso C, Lauritano C, **Carrella S***. From the Sea for the Sight: Marine Derived Products for Human Vision. Front Aging Neurosci. 2022 May 9;14:892764. doi: 10.3389/fnagi.2022.892764. PMID: 35615590; PMCID: PMC9124809. (*corresponding author) (2022-2023 Journal's Impact IF =5.7)
15. Ciampi L, Mantica F, López-Blanch L, Permanyer J, Rodriguez-Marín C, Zang J, Cianferoni D, Jiménez-Delgado S, Bonnal S, Miravet-Verde S, Ruprecht V, Neuhauss SCF, Banfi S, **Carrella S**, Serrano L, Head SA, Irimia M. Specialization of the photoreceptor transcriptome by Srrm3-dependent microexons is required for outer segment maintenance and vision. Proc Natl Acad Sci U S A. 2022 Jul 19;119(29):e2117090119. doi: 10.1073/pnas.2117090119. Epub 2022 Jul 12. PMID: 35858306; PMCID: PMC9303857. (2022-2023 Journal's Impact IF = 12.779)
16. Nocera GM, Viscido G, Criscuolo S, Brillante S, Carbone F, Staiano L, **Carrella S**, di Bernardo D. The VersaLive platform enables microfluidic mammalian cell culture for versatile applications. Commun Biol. 2022 Sep 29;5(1):1034. doi: 10.1038/s42003-022-03976-8. Erratum in: Commun Biol. 2022 Oct 13;5(1):1090. PMID: 36175545; PMCID: PMC9522807. (2022-2023 Journal's Impact IF =5.9)
17. **Carrella S***, Di Guida M, Brillante S, Piccolo D, Ciampi L, Guadagnino I, Garcia Piqueras J, Pizzo M, Marrocco E, Molinari M, Petrogiannakis G, Barbato S, Ezhova Y, Auricchio A, Franco B, De Leonibus E, Surace EM, Indrieri A, Banfi S*. miR-181a/b downregulation: a mutation-independent therapeutic approach for inherited retinal diseases. EMBO Mol Med. 2022 Oct 4:e15941. doi: 10.15252/emmm.202215941. Epub ahead of print. PMID: 36194668. (*co-corresponding authors) (2022-2023 Journal's Impact IF = 14)
18. Gabriele De Falco, Chiara Lauritano and **Sabrina Carrella***. "MicroRNA-Mediated Responses: Adaptations to Marine Extreme Environments" J. Mar. Sci. Eng. 2023, 11(2), 361; https://doi.org/10.3390/jmse11020361 (2022-2023 Journal's Impact IF =2.7)
19. Chiara Lauritano, Eleonora Montuori, Gabriele De Falco and **Sabrina Carrella**. "In Silico Methodologies to Improve Antioxidants' Characterization from Marine Organisms". Antioxidants 2023, 12(3), 710; https://doi.org/10.3390/antiox12030710 (2022-2023 Journal's Impact IF =7.6)

ATTENDACES at NATIONAL and INTERNATIONAL CONFERENCES

- Conte I, **Carrella S**, Avellino R, Karali M, Marco-Ferreres R, Bovolenta P, Banfi S. "miR-204 is required for vertebrate eye development via Meis 2 targeting and Pax6 regulation" 6th European Zabrafish Genetics and Development Meeting.Rome, Italy (2009).
- Conte I, **Carrella S**, Avellino R, Karali M, Marco-Ferreres R, Bovolenta P, Banfi S."The microRNA miR-204 is required for vertebrate eye development". ESHG. Gothemburg, Sweden (June, 2010) Oral presentation **(presenting author: Sabrina Carrella)**
- **Sabrina Carrella**, Ylenia D'Agostino, Sara Barbato, Francesco Giuseppe Salierno, Stephan C.F. Neuhauss, Sandro Banfi, Ivan Conte. "Study of miRNA roles in retinal axon specification and growth" 8th European Zebrafish meeting, Barcelona (July, 2013). Oral presentation
- **Sabrina Carrella**, Ylenia D'Agostino, Sara Barbato, Francesco Giuseppe Salierno, Stephan C.F. Neuhauss, Sandro Banfi, Ivan Conte. "Study of miRNA roles in retinal axon specification and growth" British Society for Developmental Biology Autumn Meeting 2013_Axon guidance and Regeneration, University of Aberdeen, Aberdeen, Scotland, UK (August, 2013).
- **Carrella S**, Indrieri A, Golia F, Romano A, Pizzo M, Marrocco E, Giordano N, Carboncino A, Tammaro R, De Leonibus E, Surace E, Banfi S, Franco B. "miR-181 modulation has a protective effect

in in vivo models of mitochondria-mediated neurodegeneration". 1st Tri-Retreat meeting. May 2016, Rome, Italy Oral presentation

- **Carrella S**., Indrieri A., Piccolo D., Ciampi L., Pizzo M., Barbato S., Marrocco E., Ezhova Y., Franco B., Surace E.M., Banfi S. "MicroRNAs miR-181a and miR-181b (miR-181a/b) downregulation as potential therapeutic approach for Inherited Retinal Diseases (IRDs)". TIGEM Retreat 2019, Paestum. Oral presentation
- **Carrella S**., Indrieri A., Piccolo D., Ciampi L., Pizzo M., Barbato S., Marrocco E., Ezhova Y., Franco B., Surace E.M., Banfi S. "MicroRNAs miR-181a and miR-181b (miR-181a/b) downregulation as potential therapeutic approach for Inherited Retinal Diseases (IRDs)" IX Neapolitan Brain Group Meeting, December 2019, Naples, Italy. Oral presentation
- **Sabrina Carrella**, Alessia Indrieri, Davide Piccolo, Ludovica Ciampi, Mariateresa Pizzo, di Guida Martina, Petrogiannakis Georgios, Sara Barbato, Elena Marrocco, Yulia Ezhova, Brunella Franco, Enrico Maria Surace, Sandro Banfi "miR-181a/b downregulation: a possible gene-independent therapeutic approach for inherited retinal diseases". ARVO 2020 meeting in Baltimore Oral presentation ARVOLearn platform (on-line due to COVID-19). Invest. Ophthalmol. Vis. Sci.. 2020; 61(7):2750.
- **Sabrina Carrella**, Alessia Indrieri, Davide Piccolo, Ludovica Ciampi, Mariateresa Pizzo, di Guida Martina, Petrogiannakis Georgios, Sara Barbato, Elena Marrocco, Yulia Ezhova, Brunella Franco, Enrico Maria Surace, Sandro Banfi "miR-181a/b downregulation: a possible gene-independent therapeutic approach for inherited retinal diseases". 2nd Genetics of Ocular Development meeting 2020, 7th September 2020 On-line Oral presentation (due to COVID-19)
- **Sabrina Carrella**, Martina Di Guida, Davide Piccolo, Ludovica Ciampi, Mariateresa Pizzo, Georgios Petrogiannakis, Sara Barbato, Elena Marrocco, , Yulia Ezhova, Brunella Franco, Enrico Maria Surace, Alessia Indrieri, Sandro Banfi. miR-181a/b downregulation: a possible gene-independent therapeutic approach for inherited retinal diseases (IRDs). (EMBO workshop- Mitochondrial homeostasis and human disease 2021)
- **Sabrina Carrella**, Martina Di Guida, Davide Piccolo, Ludovica Ciampi, Mariateresa Pizzo, Marta Molinari, Simona Brillante, Elena Marrocco, Irene Guadagnino, Georgios Petrogiannakis, Sara Barbato, Yulia Ezhova, Brunella Franco, Enrico Maria Surace, Alessia Indrier, Sandro Banfi. "AAV-Sponge-mediated modulation of miR-181a/b as a gene-independent therapeutic approach for inherited retinal diseases (IRDs)" (ESGCT 2021)
- **Sabrina Carrella**, Martina Di Guida, Davide Piccolo, Ludovica Ciampi, Mariateresa Pizzo, Marta Molinari, Simona Brillante, Elena Marrocco, Irene Guadagnino, Georgios Petrogiannakis, Sara Barbato, Yulia Ezhova, Brunella Franco, Enrico Maria Surace, Alessia Indrier, Sandro Banfi. "Modulation of miR-181a/b as a gene-independent therapeutic approach for inherited retinal diseases (IRDs)" (SIGU 2021, oral presentation)

ABSTRACTS at NATIONAL and INTERNATIONAL CONFERENCES

1. Marianthi Karali, Alessandro Gennarino, Raffaella Avellino, Ivan Conte, Antonietta Carola, Silvia Catuogno, **Sabrina Carrella**, Vincenza Maselli, Sandro Banfi. "MicroRNAs involved in eye development and function." Human health foundation & CELBIO meeting (2008).
2. Ivan Conte, **Sabrina Carrella**, Raffaella Avellino, Marianthi Karali, Sandro Banfi. "Mir-204 Modulates Optic Cup Patterning During Medaka Fish Embryonic Eye Development". ARVO meeting, Invest.Opthalmol.Vis.Sci. (2009).
3. Banfi S, **Carrella S**, Avellino R, Karali M, Marco-Ferreres R, Bovolenta P, Conte I." miR-204 is required for vertebrate eye development". 59th Annual ASHG Meeting, Hawaii. (2009)
4. R. Avellino, **S. Carrella**, M. Karali, M. Pirozzi, R. Marco-Ferreres, P. Franco, P. Stoppelli, P. Bovolenta, S. Banfi, I.Conte "miR-204 is required for lens morphogenesisi". ISER (2012) Oral presentation
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6. A Indrieri*, **S Carrella***, A. Romano, F Golia, M Pizzo, R Tammaro, E Marrocco, N Giordano, A Carboncino, A Spaziano, L Ciampi, J Henao-Mejia, A Williams, R Flavell, E De Leonibus, EM Surace, S Banfi, B Franco. miR-181a and miR-181b downregulation protects from Mitochondria-associated Neurodegeneration by enhancing mitochondrial biogenesis and mitophagy. Keystone Symposia - Mitochondrial Biology - Kyoto, Japan - April 24, 2018

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8. Indrieri Alessia*, **Carrella Sabrina***, Romano Alessia, Spaziano Alessandra, Golia Francesca, Pizzo Mariateresa, Tammaro Roberta, Marrocco Elena, Giordano Nadia, Carboncino Anna, Ciampi Ludovica, Barbato Sara, De Leonibus Elvira, Surace Enrico Maria, Banfi Sandro, Franco Brunella. mir-181a and mir-181b downregulation protects from mitochondria-associated neurodegeneration by enhancing mitochondrial biogenesis and mitophagy. VIII° MEETING NEAPOLITAN BRAIN GROUP, december 13 2018, Naples, Italy. Oral presentation
9. Indrieri A.*, **Carrella S.*,** Barbato S, Spaziano A, Marrocco E., Fernandez-Vizarra E., Volpe M.G., Pizzo M, Ezhova Y, Golia F.M, Ciampi L, Tammaro R, Giordano N, Carboncino A, Zeviani M, De Leonibus E., Surace E.M.2, Banfi S., Franco B. miR-181a/b downregulation as new therapeutic strategy in mitochondria-associated neurodegeneration IX Neapolitan Brain Group Meeting, December 12 2019, Naples, Italy. Oral presentation
10. M.Volpe, S. Barbato, A. Spaziano, R. D'alterio, M. Pizzo, R. Tammaro, E., Marrocco, F. Massa, I. Guadagnino, P. Carotenuto, E. M. Surace**, S. Carrella**, E. De Leonibus, S. Banfi, B. Franco, A. Indrieri. "AAV-mediated inhibition of miR-181a/b ameliorates the phenotype of mitochondrial disease models." ENABLE Symposium 2021, Milan, Italy
11. Brillante S, Cipollaro M, Molinari M, Banfi S, Indrieri A, **Carrella S**. miR-181a/b modulation as potential therapeutic approach for AMD treatment. Noncoding RNA World: From Mechanism to Therapy 2021 - **July 21-23, 2021** (selected for poster presentation).
12. M. Volpe, S. Barbato, R. Tammaro, A. Spaziano, M. Pizzo, F. Massa, R. D'alterio, E. Marrocco, I. Guadagnino, M. De Risi, E. M. Surace, **S. Carrella**, E. De Leonibus, S. Banfi, B. Franco, A. Indrieri." AAV-mediated inhibition of miR-181a/b as gene-independent therapeutic tool for mitochondrial diseases". EMBO Workshop: "Mitochondrial homeostasis and human disease", 21 – 24 September 2021 in Girona, Spain
13. Martina Di Guida, Irene Guadagnino, Mariateresa Pizzo, Marta Molinari, **Sabrina Carrella**, Sandro Banfi. "AAV-sponge mediated downregulation of miR-181a/b exerts a gene-independent protection on photoreceptors degeneration in inherited retinal dystrophies" 8 October 2021; 3rd Genetics of Ocular Development Meeting; Madrid, Spain, Virtual Congress - oral presentation
14. Simona Brillante, Eva Cipollaro, Marta Molinari, Sandro Banfi, Alessia Indrieri, **Sabrina Carrella**. "miR-181a/b modulation as potential therapeutic approach for AMD treatment." 8 October 2021; 3rd Genetics of Ocular Development Meeting; Madrid, Spain, Virtual Congress - oral presentation
15. **Sabrina Carrella**, Martina Di Guida, Georgios Petrogiannakis, Dalila Capasso, Mariateresa Pizzo, Marta Molinari, Simona Brillante, Eva Cipollaro, Paola Quadrano, Karla Ruiz, Santiago Negueruela, Marianthi Karali, Alessia Indrieri, Sandro Banfi. Modulation of microRNA expression: a new therapeutic avenue for inherited retinal disease? (Sandro Banfi, Invited speaker ESGCT 2021)
16. M. Volpe, S. Barbato, R. Tammaro, A. Spaziano, M. Pizzo, F. Massa, R. D'alterio, E. Marrocco, I. Guadagnino, M. De Risi, E. M. Surace, **S. Carrella**, E. De Leonibus, S. Banfi, B. Franco, A. Indrieri. "AAV-mediated inhibition of miR-181a/b as gene-independent therapeutic tool for mitochondrial diseases". Poster - ESGCT Collaborative Virtual Congress, 19 - 22 October 2021
17. M.Volpe, S. Barbato, A. Spaziano, R. Tammaro, M. De Risi, F. Massa, R. D'alterio, P. Carotenuto, **S. Carrella**, E. De Leonibus, S. Banfi, B. Franco, A. Indrieri. "AAV-mediated inhibition of miR-181a/b as gene-independent therapeutic tool for mitochondrial diseases". Oral presentation and Poster - Keystone Symposia meeting: "Small Regulatory RNAs: From Bench to Bedside", 1 - 4 May 2022 at Eldorado Hotel & Spa, Santa Fe, New Mexico, USA
18. **Brillante S**, Cipollaro M, Molinari M, Banfi S, **Carrella S**, Indrieri A. miR-181a/b modulation as potential therapeutic approach for AMD treatment. Keystone Symposia meeting 2022. Small Regulatory RNAs: From Bench to Bedside - **May 1-4, 2022** (selected for poster presentation).
19. Martina Di Guida, **Sabrina Carrella**, Irene Guadagnino, Santiago Negueruela, Jorge Garcia Piqueras, Mariateresa Pizzo, Elena Marrocco, Marta Molinari, Georgios Petrogiannakis, Alberto Auricchio, Brunella Franco, Elvira De Leonibus, Enrico Maria Surace, Alessia Indrieri, Sandro Banfi. "miR-181a/b downregulation: a mutation-independent therapeutic approach for Inherited Retinal Diseases". 7-9 June 2022; Tigem Retreat, Silvi Marina, Abruzzo, Italy.
20. G Petrogiannakis, I Guadagnino, E Marrocco, A Auricchio, DL Medina, **S Carrella**, S Banfi "Identification and evaluation of microRNAs involved in photoreceptor degeneration". TIGEM Retreat 2022, 7 - 9 June 2022 at Centro Congressi Abruzzo, Silvi Marina, Italy

21. M. Volpe, S. Barbato, R. Tammaro, A. Spaziano, M. De Risi, M. Pizzo, R. D'Alterio, F. Massa, P. Carotenuto, **S. Carrella**, E. De Leonibus, S. Banfi, B. Franco, A. Indrieri. "AAV-mediated inhibition of miR-181a/b as gene-independent therapeutic tool for mitochondrial diseases". Oral Presentation - TIGEM Retreat 2022, 7 - 9 June 2022 at Centro Congressi Abruzzo, Silvi Marina, Italy
22. M. Volpe, R. Tammaro, S. Barbato, A. Spaziano, M. Pizzo, M. De Risi, **S. Carrella**, E. De Leonibus, S. Banfi, A. Indrieri, B. Franco. "Therapeutic efficacy of miR-181a/b down regulation in Leigh syndrome". Oral presentation - XXV Congresso Nazionale della Società Italiana di Genetica Umana (SIGU), 7 - 9 September 2022 in Trieste, Italy
23. M. Volpe, S. Barbato, R. Tammaro, M. De Risi, **S. Carrella**, E. De Leonibus, S. Banfi, B. Franco, A. Indrieri. "AAV-mediated inhibition of miR-181a/b as gene-independent therapeutic tool for mitochondrial diseases". Poster - MitoNice 2022 (mitochondrial medicine meeting),15 - 17 September 2022 in Nice, France
24. G Petrogiannakis, I Guadagnino, E Marrocco, A Auricchio, DL Medina, **S Carrella**, S Banfi "Identification and evaluation of microRNAs involved in photoreceptor degeneration" ESGCT 29th Annual Congress. Edinburgh, UK. October 11–14, 2022
25. Martina Di Guida, Georgios Petrogiannakis, Dalila Capasso, Paola Brandi, Jorge Garcia-Piqueras, Karla Ruiz, Santiago Negueruela, Mariateresa Pizzo, Filomena Capolongo, Marianthi Karali, Franco Brunella, Alessia Indrieri, **Sabrina Carrella**, Sandro Banfi. "miR-181a/b downregulation: a mutation-independent therapeutic approach for Inherited Retinal Diseases". 1-15 March 2023; Telethon Congress 2023. Riva del Garda, Trentino, Italy
26. M. Volpe, S. Barbato, S. Brillante, R. Tammaro, E. Marrocco, **S. Carrella**, S. Banfi, B. Franco, A. Indrieri. "AAV-mediated inhibition of miR-181a/b as a gene-independent therapeutic tool for LHON" Oral presentation - ARVO2023 meeting, 23 - 27 April 2023 at Ernest N. Morial Convention Center, New Orleans, Louisiana, USA. Ophthalmol. Vis. Sci.. 2023; 64(8):1918.
27. S.Brillante**,**E.Cipollaro,A.Diana,M.Molinari,M.Volpe,C.Damiano,A.Tarallo,G.Parenti,S.Banfi, **S. Carrella,** A. Indrieri. miR-181a/b modulation as potential therapeutic approach for AMD treatment. The Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting 2023 - April 23-27, 2023. Invest. Ophthalmol. Vis. Sci.. 2023; 64(8):2113
28. M. Volpe, S. Brillante, R. Tammaro, M. Pizzo, A. Spaziano, S. Barbato, M. De Risi, **S. Carrella**, E. De Leonibus, S. Banfi, B. Franco, A. Indrieri. "Downregulation of miR-181a/b ameliorates the Leigh syndrome phenotype in Ndufs4 KO mice". Poster - Euromit 2023 (International meeting of mitochondrial pathology), 11 - 15 June 2023 at Palazzo dei Congressi, Bologna, Italy
29. BrillanteS, DianaA, VolpeM, CipollaroE MolinariM, DamianoC, TaralloA, BanfiS, **CarrellaS**, IndrieriA. miR-181a/b modulation as potential therapeutic approach for Stargardt disease treatment. Euromit2023. International meeting on mitochondrial pathology - June 11-15, **2023** (selected for Round Table Poster Session with the Editors during the Young Investigators Meeting).
30. Gabriele De Falco, Luca Ambrosino, Chiara Lauritano, Sandro Banfi, **Sabrina Carrella**. "MicroRNA-mediated environmental adaptation in microalgae: from physiological responses to the identification of novel biomarkers." Oral presentation. 14-17 November 2023. EVOLMAR 2023. Virtual.
31. BrillanteS, DianaA, VolpeM, CipollaroE, MolinariM, DamianoC, TaralloA, BanfiS, **CarrellaS**, IndrieriA. miR-181a/b modulation as potential therapeutic approach for Stargardt disease treatment. VI Memorial Workshop Maria Ciaramella – November 16-17, 2023
32. Gabriele De Falco, Luca Ambrosino, Chiara Lauritano, Sandro Banfi, **Sabrina Carrella**. "MicroRNA-mediated environmental adaptation in microalgae from physiological responses to biotechnology applications". Oral presentation . European Congress of Marine Biotechnology 2023, 22-24 November 2023. Malaga.