

Martina Minisini

Current work position: AIRC Post-Doc Fellowship

EDUCATION

- 1 November 2019 to 31 December 2022 PhD in Biomedical and Biotechnological Sciences cum laude at University of Udine, Udine, Italy
- December 2016 to October 2018: Master of Science in Molecular Biotechnology 110/110 cum laude; University of Udine, Udine, Italy
- October 2013 to November 2016: Bachelor of Science in Medical laboratory technicians 110/110 cum laude; University of Trieste, Trieste, Italy
- September 2008 to July 2013 High school Diploma in Classics; "Liceo Classico Statale Jacopo Stellini", Udine, Italy

Native language: Italian

Other languages: English

- Reading: C1
- Writing: B2 advanced
- Speaking: B2 advanced

ADDITIONAL COURSES

May 2022	AALAS learning library - How to work with mice and other animals in research	CHOP Institute of Philadelphia	Philadelphia - United States of America
February 2022/ April 2022	Immunology of Cancer - Cancer immunology	University of Udine and Professor B. Bonavida	Online course

September 2021	Practical course Human Genome Browsers: Gateways to Multi-OMICS Discovery. - Human Genome Browsers	University of Udine - Udine - Italy DAME
May 2021	6th International Joint CCS-CLL Workshop - Workshop on cancer research	CANCER CLUSTER SALZBURG Online course
December 2020	The CRISPR COURSE: The CRISPR discovery: the immune response in bacteria, The genome editing and the technology revolution, Bioinformatics tool to design a gene editing project - CRISPR-CAS technology	University of Udine Online course

RESEARCH EXPERIENCE

- March 2023 – present: AIRC fellowship for Italy Post-Doc: “Investigation of the immunoregulative role of MEF2A in the context of leiomyosarcoma” under the supervision of Professor Claudio Brancolini.
- May 2022 - November 2022: during PhD period I spent six months in the laboratory of Professor Wayne Hancock, CHOP Institute, Philadelphia, US. My project was about the study of Chd4, an epigenetic regulator, in the context of T regulatory cells.
- November 2019 - December 2022 PhD in Biomedical and Biotechnological Sciences in the laboratory of Professor Claudio Brancolini, Dipartimento di Area medica (DAME), “Università degli Studi di Udine”, Udine, Italy, Understanding and targeting epigenetic mechanisms to sustain the therapeutic response”.
- November 2018 - October 2019: Pre Doc fellowship in the laboratory of Professor Claudio Brancolini, Dipartimento di Area medica (DAME), “Università degli Studi di Udine”, Udine, Italy.
- March 2018 - October 2018: Training of master's thesis in the laboratory of Professor Claudio Brancolini Dipartimento di Area medica (DAME), “Università degli Studi di Udine”, Udine, Italy, Thesis title: “HDAC7 and control of the microenvironment”.
- February 2016 - November 2016: Training of bachelor's thesis in the laboratory of Professor Giuliana Decorti, Dipartimento di Scienze della Vita, Fondazione Callerio, “Università degli Studi di Trieste”, Trieste, Italy, Thesis title: “Relationship between pharmacokinetics and pharmacogenomics of TPMT enzyme in the intestinal chronic inflammatory diseases and in the acute lymphoblastic leukemia in pediatric patients in therapy with thiopurines”.
- January 2014 - January 2016: Training at the Hospital of Trieste labs.

TECHNICAL SKILLS AND COMPETENCES

- **Molecular Biology and Biochemistry:** Total RNA extraction, Genomic and Plasmidic DNA extraction, Gene cloning techniques, PCR, RT-PCR, Real time PCR, Cytofluorimetric and fluorimetric analysis, fluorescence microscopy techniques, CO-IP, ChIP, GST-Pull Down, SDS page, western blot, Immunofluorescence, HPLC, Mass-spectrometry preparation, bisulfite conversion.
- **Cell Biology:** maintenance cell culture, drug treatment, three-dimensional morphogenetic and mammosphere formation assays, lenti and retro viral infection, siRNA silencing, isolation of T regulatory or t effector cells, clonogenic assay, generation of short hairpin (knockdown) cells.
- **In vivo (mice studies):** training for six months with mice in the animal facility in USA (euthanasia, isolation of lymph nodes and spleen, isolation of organs and tumors, drug injection).
- **Tools and Software:** Good knowledge of Windows OS, Linux OS and Macintosh OS, Microsoft Office, GraphPad Prism, ImageJ, FlowJo.

SOFT SKILLS

- Teamwork and collaborative skills
- Communicative skills acquired during meetings and conferences.

RELATED PROFESSIONAL EXPERIENCE

OFA pre-courses in Cell Biology (BIO13) - University of Udine 2023/2024.

Practical laboratory support for master students of Molecular Biotechnology course – University of Udine 2023/2024 (Epigenetic Regulators and Genome Modulation – Prof Claudio Brancolini).

PARTECIPATION TO CONFERENCES

21 Giugno 2021: **32nd Pezcoller Symposium 2021** (virtual)- Poster session - Evaluation of a series of pimeloylanilide o- aminoanilide (PAOA) derivatives as inhibitors of the MEF2- HDAC axis in leiomyosarcomas.

6-8 Ottobre 2022: **AACR Special Conference on Cancer Epigenomics- Washington DC** – Poster session - The role of HDAC-MEF2 axis in the epigenetic control of immune tumoral microenvironment.

5-10 Aprile 2024: **AACR Annual Meeting 2024 – San Diego – Poster Presentation by Wayne W. Hancock.** Wayne W. Hancock, Liqing Wang, **Martina Minisini**, Eros di Giorgio, Ivan Babic, Elmar Nurmammedov; Abstract 2655: Unexpected role of the NuRD component, Chd4, in Foxp3+ Treg cells and its relevance to tumor immunotherapy. *Cancer Res* 15 March 2024; 84 (6_Supplement): 2655. (I was not present at the Meeting).

OTHER ACTIVITIES LINKED TO RESEARCH:

AIRC volunteer (2021-2024).

AWARDS:

Memory prize in memory to Paolo Rizzo a.a. 2016-2017, University of Trieste.

PhD Award in Molecular Medicine (XXXV cycle), 2024, University of Udine

PUBLICATIONS:

Di Giorgio E, Dalla E, Franforte E, Paluvai H, **Minisini M**, Trevisanut M, Picco R, Brancolini C. Different class IIa HDACs repressive complexes regulate specific epigenetic responses related to cell survival in leiomyosarcoma cells. *Nucleic Acids Res.* 2020 Jan 24;48(2):646-664. doi: 10.1093/nar/gkz1120. PMID:31754707; PMCID: PMC6954409.

Cutano V, Di Giorgio E, **Minisini M**, Picco R, Dalla E, Brancolini C. HDAC7-mediated control of tumour microenvironment maintains proliferative and stemness competence of human mammary epithelial cells. *Mol Oncol.* 2019 Aug;13(8):1651-1668. doi: 10.1002/1878-0261.12503. Epub 2019 Jun 27. PMID: 31081251; PMCID: PMC6670296.

Giorgio ED, Cutano V, **Minisini M**, Tolotto V, Dalla E, Brancolini C. A regulative epigenetic circuit supervised by HDAC7 represses IGFBP6 and IGFBP7 expression to sustain mammary stemness. *Epigenomics.* 2021 May;13(9):683-698. doi: 10.2217/epi- 2020-0347. Epub 2021 Apr 21. PMID: 33878891.

Di Giorgio E, Paluvai H, Dalla E, Ranzino L, Renzini A, Moresi V, **Minisini M**, Picco R, Brancolini C. HDAC4 degradation during senescence unleashes an epigenetic program driven by AP-1/p300 at selected enhancers and super-enhancers. *Genome Biol.* 2021 May 10;22(1):129. doi: 10.1186/s13059-021-02340-z. PMID: 33966634; PMCID: PMC8108360.

Iuliano L, Drioli S, Pignochino Y, Cafiero CM, **Minisini M**, D'Este F, Picco R, Dalla E, Giordano G, Grignani G, Di Giorgio E, Benedetti F, Felluga F, Brancolini C. Enhancing Proteotoxic Stress in Leiomyosarcoma Cells Triggers Mitochondrial Dysfunctions, Cell Death, and Antitumor Activity *in vivo*. *Mol Cancer Ther.* 2021 Jun;20(6):1039- 1051. doi: 10.1158/1535-7163.MCT-20-0521. Epub 2021 Mar 30. PMID: 33785653.

Minisini M, Di Giorgio E, Kerschbamer E, Dalla E, Faggiani M, Franforte E, Meyer- Almes FJ, Ragno R, Antonini L, Mai A, Fiorentino F, Rotili D, Chinellato M, Perin S, Cendron L, Weichenberger CX, Angelini A, Brancolini C. Transcriptomic and genomic studies classify NKL54 as a histone deacetylase inhibitor with indirect influence on MEF2-dependent transcription. *Nucleic Acids Res.* 2022 Mar 21;50(5):2566-2586. doi: 10.1093/nar/gkaco81. PMID: 35150567; PMCID: PMC8934631.

Brancolini C, Gagliano T, **Minisini M**. HDACs and the epigenetic plasticity of cancer cells: Target the complexity. *Pharmacol Ther.* 2022 Oct;238:108190. doi: 10.1016/j.pharmthera.2022.108190. Epub 2022 Apr 14. PMID: 35430294.

Iuliano L, Dalla E, Picco R, Mallavarapu S, **Minisini M**, Malavasi E, Brancolini C. Proteotoxic stress-induced apoptosis in cancer cells: understanding the susceptibility and enhancing the potency. *Cell Death Discov.* 2022 Oct 4;8(1):407. doi: 10.1038/s41420-022-01202-2. PMID: 36195608; PMCID:PMC9531228.

Vida V, **Minisini M**, Mardirossian M, Brancolini C, Scocchi M, Forzato C, Berti F. Novel synthesis of 1,2-diaza-1,3-dienes with potential biological activity from cinnamic acids and diazonium salts of anilines. *RSC Adv.* 2022 Dec 21;13(1):456-463. doi: 10.1039/d2ra07515f. PMID: 36605622; PMCID: PMC9769088.

Minisini M, Cricchi E, Brancolini C. Acetylation and Phosphorylation in the Regulation of Hypoxia-Inducible Factor Activities: Additional Options to Modulate Adaptations to Changes in Oxygen Levels. *Life (Basel).* 2023;14(1):20. Published 2023 Dec 21. doi:10.3390/life14010020.

Gualandi N, **Minisini M**, Bertozzo A, Brancolini C. Dissecting transposable elements and endogenous retroviruses upregulation by HDAC inhibitors in leiomyosarcoma cells: Implications for the interferon response. *Genomics.* 2024 Aug 3:110909. doi: 10.1016/j.ygeno.2024.110909. Epub ahead of print. PMID: 39103003.

Gagliano, T., Kerschbamer, E., Baccarani, U., **Minisini, M.**, Di Giorgio, E., Dalla, E., Weichenberger, C. X., Cherichi, V., Terrosu, G., & Brancolini, C. (2024). Changes in chromatin accessibility and transcriptional landscape induced by HDAC inhibitors in TP53 mutated patient-derived colon cancer organoids. *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie*, 173, 116374. Advance online publication. <https://doi.org/10.1016/j.biopha.2024.116374>.

Minisini M, Mascaro M, Brancolini C. HDAC-driven mechanisms in anticancer resistance: epigenetics and beyond. *Cancer Drug Resist.* 2024;7:46. Published 2024 Nov 20. doi:10.20517/cdr.2024.103