EDUCATION

2008 - 2011 **PhD Program in Molecular and Regenerative Medicine,** University of Modena and Reggio Emilia.
2007 **State Examination for the Profession of Biologist.**
2005 - 2007 **Master's Degree in Biological Sciences (LM-6),** University of Modena and Reggio Emilia.
2002 - 2005 **Bachelor's Degree in Biological Sciences (L-13).** University of Modena and Reggio Emilia.

ACADEMIC CAREER

2024 - present **Fixed-term Researcher (Type A)**
MEDS-01/A Medical Genetics
LAB. MIOGEN
Department of Biomedical, Metabolic and Neural Sciences
University of Modena and Reggio Emilia.

2021 - 2024 **Postdoctoral Fellow, MIOGEN Lab.**
PI: Prof. Rossella Tupler
Department of Biomedical, Metabolic and Neural Sciences
University of Modena and Reggio Emilia.

2019 – 2021 **Postdoctoral Fellow, Lab of Genomics and Transcriptomics.**
PI: Prof. Rossella Manfredini
Department of Life Sciences
University of Modena and Reggio Emilia.

2016–2018 **Postdoctoral Fellow, Lab. of Applied Biology.**
PI: Dr. Tommaso Zanocco
Department of Life Sciences
University of Modena and Reggio Emilia.

2011 - 2016 **Postdoctoral Fellow, Lab of Gene Expression.**
PI: Prof. Vincenzo Zappavigna
Department of Life Sciences
University of Modena and Reggio Emilia.

2008 – 2010 **PhD Program in Molecular and Regenerative Medicine,**
University of Modena and Reggio Emilia.

AWARDS AND HONORS

2023 **Post-doctoral Fellowship 2023, Umberto Veronesi Foundation**

2011 **EMBO Short-term Fellowship, Friedrich Miescher Institute (FMI) for Biomedical Research, Basel, Switzerland**

2008–2010 **Fellowship from the Italian Ministry of Education, University and Research (MIUR)**

Sept 2006 **Summer School "Neurobiology of Adaptation and Stress", Radboud University, Nijmegen (Netherlands)**

SCIENTIFIC ROLES

Reviewer for international scientific journals (Nature Communications, Molecules, International Journal of Molecular Sciences, Genes)

TEACHING ACTIVITIES

A.Y. 2024 - 2025 Lecturer (2 hours) in Principles and Biomedical Methodologies – Master's Degree in Bioengineering for Innovation in Medicine

A.Y. 2022 – 2023 Lecturer (2 hours) in Molecular Human Genetics and Epigenetic Control of the Genome – Master's Degree in Medical Biotechnology

A.Y. 2016 – 2019 Lab Teaching Assistant (18 hours/year) – Biomolecular Technologies, Bachelor's Degree in Biotechnology

A.Y. 2009 – 2015 Lab Teaching Assistant (30 hours/year) – Molecular Biology, Bachelor's Degree in Biological Sciences

BIBLIOMETRIC INDICATORS

Total Publications: 20
First-author Publications: 7
Total Citations: Scopus = 334; Google Scholar = 441; ISI Web of Science = 321
H-index: Scopus = 12; Google Scholar = 13; ISI WoS = 12
i10-index (Google Scholar): 17

Peer- Reviewed Publications

1. Bianchi E., Rontauroli S., Tavernari L., Mirabile M., Pedrazzi F., Genovese E., Sartini S., Dall'Ora M., Grisendi G., Fabbiani L., Maccaferri M., Carretta C., Parenti S., **Fantini S.**, Bartalucci S., Calabresi L., Balliu M., Guglielmelli P., Potenza L., Tagliafico E., Losi L., Dominici M., Luppi M., Vannucchi AM & Manfredini R. Inhibition of ERK1/2 signaling prevents bone marrow fibrosis by reducing osteopontin plasma levels in a myelofibrosis mouse model. Leukemia, 37, 2023.
2. Genovese E., Mirabile M., Rontauroli S., Sartini S., **Fantini S**., Tavernari L., Maccaferri M., Guglielmelli P., Bianchi E., Parenti S., Carretta C., Mallia S., Castellano S., Colasante C., Balliu M., Bartalucci, Palmieri R., Ottone T., Mora B., Potenza L. Passamonti F., Voso M.T., Luppi M., Vannucchi A.M., Tagliafico E., Manfredini R. The response to Oxidative Damage Correlates with Driver Mutations and Clinical Outcome in Patients with Myelofibrosis. *Antioxidants, 11, 1, 2022.*
3. **Fantini S.,** Rontauroli S., Sartini S., Mirabile M., Bianchi E., Badii, F., Maccaferri M., Guglielmelli P., Ottone T., Pamieri R., Genovese E., Carretta C., Parenti S., Mallia S., Tavernari L., Salvadori C., Gesullo F., Maccari C., Zizza M., Grande A., Salmoiraghi S., Mora B., Potenza L., Rosti V., Passamonti F., Rambaldi A., Voso M.T., Mecucci C., Tagliafico E., Luppi M., Vannucchi A.M. and Manfredini R. Increased plasma levels of Lncrnas LINC01268, GAS5 and MALAT1 correlate with negative prognostic facotrs in myelofibrosis. Cancers 13, 19, 2021.
4. Parenti, S, Rontauroli, S., Carretta, C., Mallia, S., Genovese, E., Chiereghin, C., Peano, C., Tavernari, L., Bianchi, E., **Fantini, S.**, Sartini, S., Romano, O., Bicciato, S., Tagliafico, E., Della Porta, M. and Manfredini, R. Mutated clones driving leukemic transformation are already detectable at the single-cell level in CD34-positive cells in the chronic phase of primary myelofibrosis. *Npj Precis. Oncol.* 2021.
5. Rontauroli S., Castellano S., Guglielmelli P., Zini R., Bianchi E., Genovese E., Carretta C., Parenti S., Fantini S., Mallia S., Tavernari L., Sartini S., Mirabile M., Mannarelli C., Gesullo F., Pacilli A., Pietra D., Rumi E., Salmoiraghi S., Mora B., Villani L., Grilli A., Rosti V., Barosi G., Passamonti F., Rambaldi A., Malcovati L., Cazzola M., Bicciato S., Tagliafico E., Vannucchi A.M. and Manfredini R. Gene expression profile correlates with molecular and clinical features in patients with myelofibrosis. Blood Adv. 9; 5(5), 2021.
6. Bertesi, M.*, **Fantini, S.***, Alecci, C., Lotti, R., Martello, A., Parenti, S., Carretta, C., Marconi, A., Grande, A., Pincelli, C., Zanocco-Marani, T. Promoter Methylation Leads to Decreased ZFP36 Expression and Deregulated NLRP3 Inflammasome Activation in Psoriatic Fibroblasts. *Frontiers in Medicine,* 2021.
   *These Author contributed equally to this work.
7. Carretta, C., Mallia, S., Genovese, E., Parenti, S., Rontauroli, S., Bianchi, E., **Fantini, S**., Sartini, S., Tavernari, L., Tagliafico, E. and Manfredini, R. Genomic analysis of hematopoietic stem cells t single-cell level: Optimization of cell fixation and whole genome amplification (WGA) protocol. Int. J. Mol. Sci. 2020.
8. Zanfi, E.D.*, **Fantini, S**.*, Lorri, R., Bertesi, M., Marconi, A., Grande, A., Manfredini, R., Pincelli, C., Zanocco-Marani, T. Wnt/CTNNB1 Signal Transduction Pathway Inhibits the Expression of ZFP36 in Squamous Cell Carcinoma, by Inducing Transcriptional Repressors SNAI1, SLUG and TWIST. *Int J Mol Sci*. 2020.
   *These Author contributed equally to this work.
9. Lauriola, A., Martello, A., **Fantini, S.**, Marverti, G., Zanocco-Marani, T., Davalli, P., Guardavaccaro, D., Mai, S., Caporali, A., D'Arca D. Depletion of Trichoplein (TpMs) Causes Chromosome Mis-Segregation, DNA Damage and Chromosome Instability in Cancer Cells. *Cancers.* 2020.
10. Mammoli, F., Parenti, S., Lomiento, M., Gemelli, C., Atene, C.G., Grande, A., Corradini, R., Manicardi, A., **Fantini, S.,** Zanocco-Marani, T., Ferrari, S. Physiological expression of miR-130a during differentiation of $CD34^+$ human hematopoietic stem cells results in the inhibition of monocyte differentiation. *Experimental Cell Research*, 2019.

11. Parenti, S., Montorsi, L., **Fantini, S.**, Mammoli, F., Gemelli, C., Atene, C.G., Losi, L., Frassineti, C., Calabretta, B., Tagliafico, E., Ferrari, S., Zanocco-Marani, T., Grande, A. KLF4 mediates the effect of 5-ASA on the β-catenin pathway in colon cancer cells. *Cancer Prev Res,* 2018.
12. **Fantini, S.,** Salsi, V., Zappavigna, V. HOX cluster-embedded micro-RNAs and cancer. *Biochim Biophys Acta Rev Cancer*, 2018: 11; 1869(2), 230-247.
13. **Fantini, S**., Salsi, V., Reggiani, L., Maiorana, A., Zappavigna, V. The miR-196b miRNA inhibits the GATA6 intestinal transcription factor and is upregulated in colon cancer patients. *Oncotarget*, 2017
14. Salsi V., **Fantini S.**, Zappavigna V. NUP98 fusion oncoproteins interact with the APC/C(Cdc20) as a pseudosubstrate and prevent mitotic checkpoint complex binding. *Cell cycle*, 2016; 15(17), 2275-2287. IF: 3.304.
15. **Fantini, S**., Salsi, V., Vitobello, A., Rijli, FM., Zappavigna, V. MicroRNA-196b is transcribed from an autonomous promoter and is directly regulated by Cdx2 and by posterior Hox proteins during embryogenesis. *Biochim Biophys Acta Gene Regulatory Mechanisms*, 2015; 1849(8), 1066-1080. IF: 5.179.
16. Salsi V., Ferrari S., Gorello P., **Fantini S**., Chiavolelli F., Mecucci C., Zappavigna V. NUP98 oncoproteins promote aneuloidy by attenuating the mitotic spindle checkpoint. *Cancer Research*, 2014; 74(4), 1079-1090. IF: 9.13.
17. Brison N., Debeer P**., Fantini S**., Oley C., Zappavigna V., Luyten FP., Tylzanowski P. An N-terminal G11A mutation in HOXD13 causes synpolydactyly and interferes with Gli3R function during limb pre-patterning. *Human Molecular Genetics*, 2012; 21(11), 2464-2475. IF: 4.902.
18. Capellini, T.D., Handschuh, K., Quintana, L., Ferretti, E., Di Giacomo, G., **Fantini. S**., Vaccari. G., Clarke. S.L., Wenger. A.M., Bejerano.G., Sharpe. J., Zappavigna. V., and Selleri. L. Control of pelvic girdle development by genes of the Pbx family and Emx2. *Developmental Dynamics*, 2011; 240, 1173-1189. IF: 2.507.
19. Capellini, T., Vaccari, G., Ferretti, E., **Fantini S.**, He, M., Pellegrini, M., Quintana, L., Di Giacomo, G., Sharpe, J., Selleri, L., and Zappavigna, V. Scapula development is governed by genetic interactions of *Pbx1* with its family members and with *Emx2* via their cooperative control of *Alx1*. *Development*, 2010; 137, 2559-2569. IF 5.413.
20. **Fantini S**., Vaccari G., Brison N., Debeer P., Tylzanowski P., Zappavigna V. A G220V substitution within the N-terminal transcription regulating domain of HOXD13 causes a variant synpolydactyly phenotype. *Human Molecular Genetics*. 2009; 18(5):847-860 [articolo su rivista]. IF: 4.902.

Quanto dichiarato nel presente curriculum vitae corrisponde al vero ai sensi degli artt. 46 e 47 del D.P.R. 445/2000

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 GDPR 679/16.

Modena, 7 July 2025

Sebastian Fantini