



Fazio Antonietta

Date of birth:

Address:

Telephone:

TRAINING

- **15/10/2023 – Ongoing: PostDoctoral Fellow (BIO/16)**
Department of Biomedical and Neuromotor Sciences (DIBINEM), Alma Mater Studiorum, University of Bologna, Cellular Signalling Laboratory, Center of Clinical Surgical Experimental and Molecular Anatomy.
Project: “Cellular mechanisms of breast cancer stemcell-driven aggressiveness”, Supervisor: Prof.ssa Giulia Ramazzotti
- **1/11/2022 – 14/10/2023: PostDoctoral Fellow (BIO/16)**
Department of Biomedical and Neuromotor Sciences (DIBINEM), Alma Mater Studiorum, University of Bologna, Cellular Signalling Laboratory, Center of Clinical Surgical Experimental and Molecular Anatomy.
Project: “Verso l’Identificazione dei PROCessi patologici cellulari e molecolari coinvolti nell’insorgenza e progressione della coxARTrosi”. – ALMA IDEA 2022. Supervisor: Dott. Camilla Evangelisti.
- **1/11/2019 – 30/03/2023: PhD in Biomedical and Neuromotor Sciences (BIO/16)**
Department of Biomedical and Neuromotor Sciences (DIBINEM), Alma Mater Studiorum, University of Bologna, Cellular Signalling Laboratory, Center of Clinical Surgical Experimental and Molecular Anatomy.
Project: “Investigation of the signal transduction mechanisms involved in the anthracycline-induced cardiotoxicity”.
Supervisors: Prof. Lucia Manzoli and Prof. Stefano Ratti.
- **01/2020: Recognition of the professional qualification of Biologist – Section A**, released from “Ordine Nazionale dei Biologi”. University of Parma, Parma (Italy)
- **3/09/2016 – 14/03/2019: Master’s degree in Medical Biotechnology (LM-9)**
Internship at the Department of Biomedical and Neuromotor Sciences (DIBINEM), Alma Mater Studiorum, School of Medicine and Surgery, University of Bologna, Transduction Signal and New Therapies Lab. Supervisor: Prof. Alberto Maria Martelli.
Final Mark: 110/110 cum laude
Thesis: “The downregulation of nuclear protein lamin A/C is involved in cell migration and invasion in Ewing sarcoma”.
- **09/2012 – 22/02/2016: Bachelor’s degree in Biological Sciences (L-13)**
University of Perugia (Italy)
Final Mark: 104/110.
Thesis: “Prevention and control of Hepatitis A virus infections”. Internship at the Department of Experimental Medicine.
Supervisor: Prof. Barbara Camilloni

PROFESSIONAL EXPERIENCES and PERIODS ABROAD

- **18/05/2021 – 30/09/2021: 5-month fellowship at the Institute of Experimental Pharmacology and Toxicology, Universitätsklinikum Hamburg-Eppendorf (UKE), Hamburg (Germany)**
Project: “Generation of a human cellular model of cardiac proteotoxicity with CRYABR120G iPSCs”. Supervisor: Prof. Lucie Carrier.
- **Post-graduate training: 22/03/2019 – 31/10/2019**
Department of Biomedical and Neuromotor Sciences (DIBINEM), Alma Mater Studiorum, University of Bologna.

Project: “Signalling pathways in cellular models of cardiac amyloidosis”.

- **Pre-graduate internship: 1/06/2016 – 31/07/2016**

Biochemistry Section, Universitätsklinikum Hamburg-Eppendorf (UKE), Hamburg (Germany)

Project: “Study of localization and activity of GlcNAc-1-phosphotransferase in Mucopolipidosis type II and type III”.

Supervisor: Prof Thomas Braulke.

RESEARCH INTEREST

I am currently conducting a project based on the acquisition of innovative scientific data related to the cellular and molecular characteristics of primary pericytes in patients affected by collagen VI-related myopathies. Furthermore, during the PhD program and still ongoing, I focused on the study of the signal transduction pathways involved in anthracycline-induced cardiotoxicity, aiming to identify novel targets for the development of preventive strategies. To achieve this goal, both primary cell lines and immortalized cell lines were employed.

TECHNICAL SKILLS

Cellular and molecular biology: adhesion and suspension cell culture (cell lines and primary samples); culture of human iPSC lines and differentiation in hiPSC-derived cardiomyocytes; creation of engineered heart tissue from hiPSC-derived cardiomyocytes and evaluation of kinetic parameters; in vitro mutagenesis, E. coli transformation, restriction analysis of DNA, transient and lentiviral transfection (silencing/overexpression), RNA and DNA extraction, qPCR, PCR for genotyping; investigation of bio-molecular mechanisms through western blotting, flow cytometric analyses, optical and fluorescence microscopy; drug toxicity testing; viral culture and viral replication kinetics. **Histochemistry**: Handling of mouse heart tissues; microtome sectioning; staining with colorimetric and fluorescent antibodies.

METRICS

Source: Scopus 2023

Documents: 14

Citations: 132

h-index: 6

PUBLICATIONS

1. Koufi, F., Neri, I., Ramazzotti, G., Rusciano, I., Mongiorgi, S., Shin, M., Kosodo, Y., Marvi, M.V., **Fazio, A.**, Cani, I., Giorgio, E., Cortelli, P., Manzoli, L. & Ratti, S. (2023) *Lamin B1 as a key modulator of the developing and aging brain*. Front. Cell. Neurosci.
2. Pietsch N., Cheng, J., **Fazio, A.**, Ewald, L., Alizoti, E., Krämer, E., Orthey, E., Carrier, L., & Singh, S. R. (2023) *Generation of a homozygous CRYAB p.Arg120Gly mutant (UKEi001-A-1) from a human iPSC line*. Stem Cell Res., 71, 103188.
3. **Fazio, A.***, Evangelisti, C., Cappellini, A., Mongiorgi, S., Koufi, F.-D., Neri, I., Marvi, M. V., Russo, M., Ghigo, A., Manzoli, L., Fiume, R., & Ratti, S. (2023) *Emerging Roles of Phospholipase C Beta Isozymes as Potential Biomarkers in Cardiac Disorders*. Int. J. Mol. Sci., 24(17), 13096. (*first)
4. Vidalle, M. C., Sheth, B., **Fazio, A.**, Marvi, M. V., Leto, S., Koufi, F. D., Neri, I., Casalin, I., Ramazzotti, G., Follo, M. Y., Ratti, S., Manzoli, L., Gehlot, S., Divecha, N., & Fiume, R. (2023) *Nuclear Phosphoinositides as key determinants of nuclear functions*. Biomolecules, 13(7), 1049.
5. De Stefano, A., Marvi, M. V., **Fazio, A.**, McCubrey, J. A., Suh, P. G., Ratti, S., Ramazzotti, G., Manzoli, L., Cocco, L., & Follo, M. Y. (2023) *Advances in MDS/AML and inositolide signalling*. Adv Biol Regul., 87, 100955.
6. Chiarini, F., Paganelli, F., Balestra, T., Capanni, C., **Fazio, A.**, Manara, M. C., Landuzzi, L., Petrini, S., Evangelisti, C., Lollini, P. L., Martelli, A. M., Lattanzi, G., & Scotlandi, K. (2022) *Lamin A and the LINC complex act as potential tumor suppressors in Ewing Sarcoma*. Cell Death Dis., 13(4), 346.

7. Ratti, S., Evangelisti, C., Mongiorgi, S., De Stefano, A., **Fazio, A.**, Bonomini, F., Follo, M. Y., Faenza, I., Manzoli, L., Sheth, B., Vidalle, M. C., Kimber, S. T., Divecha, N., Cocco, L., & Fiume, R. (2021). *Modulating Phosphoinositide Profiles as a Roadmap for Treatment in Acute Myeloid Leukemia*. *Front. Oncol.*, 11, 678824.
8. Parisi, S., Finelli, C., **Fazio, A.**, De Stefano, A., Mongiorgi, S., Ratti, S., Cappellini, A., Billi, A. M., Cocco, L., Follo, M. Y., & Manzoli, L. (2021) *Clinical and Molecular Insights in Erythropoiesis Regulation of Signal Transduction Pathways in Myelodysplastic Syndromes and β -Thalassemia*. *Int J Mol Sci.*, 22(2), 827.
9. Cappellini, A., Mongiorgi, S., Finelli, C., **Fazio, A.**, Ratti, S., Marvi, M. V., Curti, A., Salvestrini, V., Pellagatti, A., Billi, A. M., Suh, P. G., McCubrey, J. A., Boultonwood, J., Manzoli, L., Cocco, L., & Follo, M. Y. (2020) *Phospholipase C beta1 (PI-PLCbeta1)/Cyclin D3/protein kinase C (PKC) alpha signaling modulation during iron-induced oxidative stress in myelodysplastic syndromes (MDS)*. *FASEB*, 34(11), 15400–15416.
10. **Fazio, A.***, Owusu Obeng, E., Rusciano, I., Marvi, M. V., Zoli, M., Mongiorgi, S., Ramazzotti, G., Follo, M. Y., McCubrey, J. A., Cocco, L., Manzoli, L., & Ratti, S. (2020) *Subcellular Localization Relevance and Cancer-Associated Mechanisms of Diacylglycerol Kinases*. *Int J Mol Sci.*, 21(15), 5297. (*first)
11. Owusu Obeng, E., Rusciano, I., Marvi, M. V., **Fazio, A.**, Ratti, S., Follo, M. Y., Xian, J., Manzoli, L., Billi, A. M., Mongiorgi, S., Ramazzotti, G., & Cocco, L. (2020) *Phosphoinositide-Dependent Signaling in Cancer: A Focus on Phospholipase C Isozymes*. *Int J Mol Sci*, 21(7), 2581.
12. Xian, J., Owusu Obeng, E., Ratti, S., Rusciano, I., Marvi, M. V., **Fazio, A.**, De Stefano, A., Mongiorgi, S., Cappellini, A., Ramazzotti, G., Manzoli, L., Cocco, L., & Follo, M. Y. (2020) *Nuclear Inositides and Inositide-Dependent Signaling Pathways in Myelodysplastic Syndromes*. *Cells*, 9(3), 697.
13. Martelli, A.M., Paganelli, F., **Fazio, A.**, Bazzichetto, C., Conciatori, F., & McCubrey, J. A. (2019) *The Key Roles of PTEN in T-Cell Acute Lymphoblastic Leukemia Development, Progression, and Therapeutic Response*. *Cancers*, 11(5), 629.
14. Chiarini, F. Evangelisti, C., Cenni, V., **Fazio, A.**, Paganelli, F., Martelli, A. M., & Lattanzi, G. (2019) *The Cutting Edge: The Role of mTOR Signaling in Laminopathies*. *Int J Mol Sci.*, 20(4), 847.

PARTICIPATION IN NATIONAL AND INTERNATIONAL CONFERENCES

- **2023: The Biennial Congress of the ABCD**, Paestum (Italy). Participation with **Poster**: “Exploring the impact of pericytes on muscle regeneration in COL6-related myopathies”
- **2023: 76th SIAI National Congress**, Modena, Italy. Participation with **Oral communication**: “Altered COL6-NG2 binding impairs pericyte regenerative potential in COL6-related myopathies”
- **2023: XXXIX SII Congress**, Vulcano, Italy. Participation with **Oral communication**: “Investigation of cellular and molecular mechanisms in pericytes of patients affected by COL6-related myopathies”
- **2022: 75th SIAI National Congress**, Padova, Italy. Participation with **Poster**: “Potential role of PLC β 2 in DOX-induced cardiotoxicity”
- **2021: 36th Annual Meeting of the ISHR**, Online event.
- **2019: XXII national congress of national society in cardiovascular research**, Imola (Italy).

PARTICIPATION IN SEMINARS

- **2023: Medicine and Surgery research seminar 2023**, Bologna (Italy). **Oral communication**: “Collagen VI-related myopathies: the emerging role of pericytes in tissue regeneration”

- **2021: Leducq Foundation**, Online event. **Oral communication:** “*Generation of a human cellular model of cardiac proteotoxicity with CRYABR120G iPSCs*”

ABSTRACT PRESENTED AT CONFERENCES

- **2023: 76th SIAI National Congress**, Modena, Italy. “*Anatomical variants of the left vertebral artery: a case report*” A. M. Billi, **A. Fazio**, M.V. Marvi, M. Quaranta, E. Orsini, S. Lodi, G.A. Mariani, S. Ratti and L. Manzoli
- **2023: 37th annual meeting of International Society for Heart Research (ISHR)**, Porto (Portugal). “*A CRYAB p. Arg120Gly Human Disease Model Exhibits Important Hallmarks of Desmin-related Cardiomyopathy*” E. Alizoti, L. Ewald, N. Pietsch, **A. Fazio**, J. Cheng, E. Orthey, I. Momken, L. Carrier, M. Mericskay and S.R. Singh
- **2022: XXIV World Congress International Society for Heart Research (ISHR)**, Berlin (Germany). Poster: “*A Human CRYABR120G Desmin-related Cardiomyopathy Cellular Model*” N. Pietsch, **A. Fazio**, J. Cheng, E. Orthey, E. Krämer, S. Schlossarek, L. Carrier and S.R. Singh
- **2021: 74th SIAI National Congress**, Bologna (Italy). Poster: “*Low levels of lamin A and mislocalization of LINC complex proteins are linked to metastatic potential in Ewing sarcoma*” F. Paganelli, **A. Fazio**, T. Balestra, C. Capanni, M.C. Manara, S. Petrini, C. Evangelisti, A.M. Martelli, G. Lattanzi, K. Scotlandi and F. Chiarini
- **2021: 7th translational research e-conference myelodysplastic syndromes for European School of Haematology (ESH)**, Online event. “*Phospholipase C beta1 (PI-PLCbeta1)/Cyclin D3/Protein Kinase C (PKC) alpha Signaling Modulation during Iron-induced Oxidative Stress in Myelodysplastic Syndromes (MDS)*” A. De Stefano, S. Mongiorgi, A. Cappellini, S. Parisi, M. Fogli, **A. Fazio**, S. Ratti, M. V. Marvi, L. Manzoli, L. Cocco, M. Y. Follo and C. Finelli
- **2019: 61st Annual Meeting of the Italian Cancer Society**, Napoli (Italy). “*Lamin A acts as a tumor suppressor in Ewing Sarcoma promoting neural differentiation and reducing cell migration and invasion*” Chiarini, T. Balestra, **A. Fazio**, F. Paganelli, M. C. Maltarello, C. Evangelisti, C. Capanni, S. Petrini, A. M. Martelli, G. Lattanzi and K. Scotlandi
- **2019: The Biennial Congress of the ABCD**, Bologna (Italy). “*Inositide-dependent signalling in low- and high-grade gliomas*” M. V. Marvi, E. O. Obeng, I. Rusciano, **A. Fazio**, S. Mongiorgi, M. Zoli, S. Ratti, L. Manzoli and L. Cocco
- **2019: The Biennial Congress of the ABCD**, Bologna (Italy). “*Lamin A behaves as a tumor suppressor in Ewing Sarcoma triggering neural differentiation and reducing cell migration and invasion*” F. Chiarini, **A. Fazio**, F. Paganelli, T. Balestra, C. Evangelisti, M.C. Maltarello, C. Capanni, S. Petrini, A.M. Martelli, K. Scotlandi, and G. Lattanzi
- **2019: 72th SIAI National Congress**, Napoli (Italy). “*Optimization of Flow-Cytometric and Molecular Assays to detect Oxidative Stress in Hematopoietic Cells*” A. Cappellini, S. Mongiorgi, M. Y. Follo, C. Finelli, M. Fogli, J. Xian, S. Parisi, **A. Fazio**, D. Russo, M. Miglino, L. Cocco and L. Manzoli.
- **2018: ABCD Meeting “Signal Transduction in Cancer”**, Torino (Italy). “*Exploring the role of the nuclear protein lamin A/C in osteoblasts and osteosarcoma cells*” F. Chiarini, C. Evangelisti, **A. Fazio**, F. Paganelli and G.Lattanzi.
- **2018: ABCD Meeting “Signal Transduction in Cancer”**, Torino (Italy). “*Targeting Wnt/b-catenin and PI3K pathways in T-cell acute lymphoblastic leukemia*” C. Evangelisti, C. Evangelisti, F. Chiarini, F. Paganelli, **A. Fazio**, A. Cappellini, A.M. Martelli

COURSES

- **2021: Training course in microscopy**, “Vedere per credere” organized by Fondazione Golinelli, Bologna.
- **2020: Basic course in laboratory animal science**, organized by University of Bologna
- **2018: Basic Practical Course of Cytometry B**, organized by Italian Society of Cytometry, Frascati-Roma

- **2017: Summer School:** “Innovation and technology management in medical and pharmaceutical Biotechnology”, organized by Bologna Business School, Bologna

MEMBERSHIP OF SCIENTIFIC SOCIETIES:

- Member of the Italian Society of Immunohistochemistry (SII)
- Member of the Italian Society of Anatomy and Histology (SIAI)
- Member of the Italian Association of cell biology and differentiation (ABCD)

TEACHING ACTIVITY:

- **2023/2024: teaching tutor** in Laboratories of anatomical and physiological bases of organ pathologies (90922) in Medical Biotechnology course, Department of Medical and Surgical Sciences of the University of Bologna, Bologna (Italy).
- **2023-2022: co-supervisor** for laboratory techniques and thesis projects at Cellular Signalling Laboratory, Center of Clinical Surgical Experimental and Molecular Anatomy, University of Bologna, Bologna (Italy).
- **2021-2023:** participation in **Laboratories of Macroscopic and Microscopic Human Anatomy** at the Department of Biomedical and Neuromotor Sciences of the University of Bologna, Bologna (Italy).

HONOURS and AWARD

- **ABCD Travel grant** for participating to the “2023 ABCD National Meeting”, Paestum (Italy) (21–23/09/23)
- **Participation Award** for the XXXIX Congress of Italian Society of Immunohistochemistry (SII) at Vulcano, Italy (14-17/06/23)
- **MarcoPolo 2021 scholarship:** 4-month grant for PhD laboratory collaboration between Universitätsklinikum Hamburg-Eppendorf and University of Bologna.
- **Erasmus grant:** 2 months at the Universitätsklinikum Hamburg-Eppendorf, Hamburg (Germany).

I allow the use and processing of my personal data according to the DLgs 196/2003 concerning the handling of personal data.

Bologna, 09/11/2023