

Curriculum Vitae

Personal information

Federica Biancucci

f @
■■■■■■■■■■

Professional experiences

Start: 1/12/2019 End: 31/10/2020

Fellowship winner at Department of Biomolecular Sciences in Urbino Via Aurelio Saffi 2- 61029 Urbino

Molecular biology laboratory activities such as: Real Time PCR, RNA extraction from blood samples, cloning of bacteria for recombinant protein expression, laboratory techniques for cell growth and proliferation in culture, qualitative and quantitative analysis techniques for proteins such as SDS-PAGE electrophoresis or protein assay.

Contact person: Mauro Magnani

Start: 10/2021 End: 01/2022

Employment contract for teaching support activities for the official teaching of PROTEOMICS AND METABOLOMICS (disciplinary scientific sector BIO/10 - Biochemistry), 10 hours, degree course in Medical Biotechnology for diagnostics and therapy at the University of Urbino.

28-30/04/2021, 05-07/05/2021, 12-14/05/2021

Laboratory assistance of "Biochemical Methodologies" Prof. Michele Menotta at University of Urbino, DISB

Start: 10/2022 End: 01/2023

Employment contract for teaching support activities for the official teaching of PROTEOMICS AND METABOLOMICS (disciplinary scientific sector BIO/10 - Biochemistry), 10 hours, degree course in Medical Biotechnology for diagnostics and therapy at the University of Urbino.

17/01/2023

Marke Bio Bank – Wet Webinar Uniurb

Took part as organizer in the Workshop on Metabolomics: "Metabolome of cells from ataxia telangiectasia patients using orbitrap technology" at University of Urbino

Education and training

05/23

Marke Bio Bank – Wet Webinar Uniurb

Took part as organizer in the Workshop on Proteomics: “Bottom-up proteomics using orbitrap technology” at University of Urbino.

06/2013

High school diploma from Istituto Magistrale Santa Rosa da Viterbo, Via San Pietro 27-01100 Viterbo

10/10/2019

Master's Degree in Pharmaceutical Chemistry and Technology from University of URBINO 'Carlo BO' - Department of Biomolecular Sciences. Single-cycle master's degree

Master's thesis title: Characterization of the recombinant enzyme Urb-PAL and its possible applications in PKU

Subjects studied: inorganic and organic chemistry, physical methods in organic chemistry, pharmaceuticals, pharmacology, drug design and development, pharmaceutical legislation.

Start: 1/11/2020 End: In progress

Winner of PhD fellowship in Biomolecular and Health Sciences at the Department of Biomolecular Sciences in Urbino Via Aurelio Saffi 2- 61029 Urbino with duration of three years.

Project: Proteome and Metabolome Characterization in Cells Affected by Rare Genetic Diseases and Pharmacological Modulation

Start: 5/03/2017 End: 5/09/2017

Training internship (provided by the school curriculum) at the Pharmacy Zonghi Francesco and Cerri Donatella -52, Piazza Europa - 01019 Vetralla (VT)

07/2020

Licensed to practice as a pharmacist by passing the State Examination at the University of Urbino-School of Pharmacy (DISB)

18/11/2020

Training on Orbitrap Exploris 240 mass spectrometer by Thermo Fisher Scientific Specialist Igor Fochi

Start: 19/11/2020 End: 20/11/2020

Metabolomics training by Thermo Fisher Scientific Specialist Igor Fochi

24/11/2020

Workshop Thermo Fisher: “Orbitrap Technology: a step forward in untargeted analysis”

27/11/2020

Workshop Thermo Fisher: “The Orbitrap revolution: innovation, technology and potential”

Start: 22/02/2021 End: 23/02/2021

Training di Proteomica by a Thermo Fisher Scientific Specialist

Start: 15/06/2021 End: 16/06/2021

Metabolomics training by Thermo Fisher Scientific Specialist Igor Fochi

Start: 27/10/2021 End: 1/10/2021

25° Mass spectrometry course at the University of Siena

14/02/2023 e 22/02/23

Proteomics training by Thermo Fisher Scientific Specialist Riccardo Stucchi

14/05/2023

Webinar on "Understanding Metabolic Pathways Using Mass Isotopologue Analysis with HILIC Zeno MRM High-Resolution".

Publications

Scientific article

Anastasia Ricci, Sara Orazi, Federica Biancucci, Mauro Magnani and Michele Menotta. The nucleoplasmic interactions among Lamin A/C-pRB-LAP2 α -E2F1 are modulated by dexamethasone. *Scientific Reports*. 2021 May 11:10099; <https://doi.org/10.1038/s41598-021-89608-3>.

Scientific article

Anastasia Ricci, Federica Biancucci, Mauro Magnani and Michele Menotta. Transcriptomic profile of ataxia telangiectasia cells treated for 30 days with a low dose of dexamethasone. *Alif Life*. 2021; 14:1, 277-286, DOI: 10.1080/26895293.2021.1911863

Scientific article

Ricci A, Biancucci F, Morganti G, Magnani M, Menotta M. New human ATM variants are able to regain ATM functions in ataxia telangiectasia disease. *Cell Mol Life Sci*. 2022 Nov 23;79(12):601. doi: 10.1007/s00018-022-04625-3. PMID: 36422718 Free PMC article.

Scientific article

Alessandra Fraternali, Marta De Angelis, Riccardo De Santis, Donatella Amatore, Sofia Masini, Francesca Monittola, Michele Menotta, Federica Biancucci, Francesca Bartocchini, Michele Retini, Valentina Fiori, Raouf Fioravanti, Fabio Magurano, Laura Chiarantini, Florigio Lista, Giovanni Piersanti, Anna T Palamara, Lucia Nencioni, Mauro Magnani, Rita Crinelli. Targeting SARS-CoV-2 by synthetic dual-acting thiol compounds that inhibit Spike/ACE2 interaction and viral protein production. *The FASEB Journal*, 30 december 2022, <https://doi.org/10.1096/fj.202201157RR>

Scientific article

Alessandro Bregalda¹, Claudia Carducci², Maria Teresa Viscomi³, Francesca Pierigè⁴, Sara Biagiotti⁴, Michele Menotta⁴, Federica Biancucci⁴, Tiziana Pascucci⁵, Vincenzo Leuzzi⁶, Mauro Magnani⁷, Luigia Rossi⁷ Myelin basic protein recovery during PKU mice lifespan and the potential role of microRNAs on its regulation. *Neurobiology of Disease* Volume 180, May 2023, 106093, DOI: [10.1016/j.nbd.2023.106093](https://doi.org/10.1016/j.nbd.2023.106093)

Scientific article

Ricci A, Biancucci F, Morganti G, Magnani M, Menotta M. Dexamethasone induces p21^{cip1/waf1} expression via FoxO3a independently of the Lamin A/C-HDAC2 interaction in Ataxia Telangiectasia. *FEBS Open Bio*. 2023 Aug;13(8):1459-1468. doi: 10.1002/2211-5463.13663. Epub 2023 Jul 3. PMID: 37345209 Free PMC article.

Scientific article

Bruschi M, Biancucci F, Masini S, Piacente F, Ligi D, Bartocchini F, Antonelli A, Mannello F, Bruzzone S, Menotta M, Fraternali A, Magnani M. The influence of redox modulation on hypoxic endothelial cell metabolic and proteomic profiles through a small thiol-based compound tuning glutathione and thioredoxin systems. *Biofactors*. 2023 Jul 6. doi: 10.1002/biof.1988. Online ahead of print. PMID: 37409789

Others

CONFERENCE PARTICIPATIONS

Naples, June 23 - 24 2022

Workshop: Trends in Biotechnology: the SIB group perspectives at University of Napoli. Participation with Oral Presentation.

Urbino, 15 July 2022

1st PhD DAY; Biomolecular and Health Sciences PhD Course; University of Urbino. Participations with Poster and Flash Oral Presentation.

Perugia, 1 December 2022

TUM biochemical researchers together again: Comparing and sharing SIB issues between Tuscany, Umbria and Marche. Participation with Poster.

Brallo di Pregola (Pavia), June 5 - 9 2023

National Meeting of PhD Candidates in Biochemical Disciplines. Participation with Oral Presentation.

Urbino, 30 June 2023

PhD DAY; Biomolecular and Health Sciences PhD Course; University of Urbino. Participations with Poster and Flash Oral Presentation.

Firenze, 7-9 September 2023

The 62nd SIB (Italian Society of Biochemistry) Conference. Participations with Poster.

PATENT

July 2021: Submission of the patent "DNA or RNA sequences coding fragments of ATM for the treatment of ataxia- telangiectasia patients and/or ATM mutations" to Ufficio Terza Missione, University of Urbino "Carlo Bo".

Personal skills and expertise

Biochemistry and Molecular Biology Laboratory Techniques.

Spectrophotometric techniques.

Mass Spectrometry techniques with ORBITRAP technology.

Spectrometry techniques, proteomics, and metabolomics.

Software for the analysis of metabolomic and proteomic data (Compound Discoverer software and Proteome Discoverer software).

Use of office and statistical packages.

Additional information

A