



EDUCATION

PhD | Università degli Studi di Pavia | 2021 – In progress

- Course name: Genetics, Molecular and Cellular Biology
- Thesis Title: “Study of etiopathogenetic mechanism and development of advanced experimental models for leukodystrophies”
- Supervisor: Professor Cristina Cereda
- Tutors: Professor Elena Botta, Doctor Donata Orioli

Master's Degree | Università degli studi di Milano | 2018 - 2021

- Course name: Pharmaceutical Biotechnology - Department of Pharmaceutical Sciences
- Thesis Title: “Long non-coding RNAs as new potential targets in Amyotrophic Lateral Sclerosis: characterization of ZEB1-AS1 in different in vitro experimental models”
- Internship at “Pediatric Clinical Research Center Romeo and Enrica Invernizzi ” – University of Milan

Bachelor's Degree | Università degli studi di Milano | 2014 - 2018

- Course name: Herbal Sciences and Technologies - Department of Pharmaceutical Sciences
- Thesis title: “Fingerprinting HPLC-UV/DAD and microscopic analysis (SEM-TEM) of seeds derived from *Nigella sativa* e *Nigella damascena*”
- Erasmus + traineeship at Vest Vasile Goldis University of Arad, Romania - Institute of Life Science
- Internship at Department of Pharmaceutical Sciences – University of Milan

High School | I.T.S.O.S “Marie Curie”, Cernusco Sul Naviglio (MI) | 2009 - 2014

- Course name: Biology and chemistry laboratory technician
- Internship at “Istituto Delle Vitamine S.P.A.” – Segrate 20090 (MI) ITALY
- Internship at “Irish Blood Transfusion Service” – Cork, IRELAND



WORK EXPERIENCES

Master's Degree Internship | Pediatric Clinical Research Center, Milan

July 2020 – June 2021

Research in the field of neurodegenerative disorders, epigenetics and obesity with a particular focus on the role of long non-coding RNAs in pathogenesis of human diseases.

Bachelor's Degree Internship | Institute of Life science, Arad & Department of Pharmaceutical Sciences, Milan

April 2017 – July 2018

Electron Microscopy, HPLC and Mass Spectrometry analysis of plant-derived samples.

High School Internships | Istituto delle Vitamine, Segrate Italy & Irish Blood Transfusion Service, Cork Ireland

April 2013 – October 2013

Research in the field of blood disorders in blood cells derived from patients with iron deficiency with particular focus on formulation of new vitamin-derived drugs.



SKILLS

- Use of SEM (Scanning Electron Microscope) and TEM (Transmission Electron Microscope) and relative softwares.
- Sample preparation for SEM and TEM according to protocols, using ultramicrotome for the sectioning of the samples and Manual Agar sputter coater.
- Using of HPLC and HPLC-MS for sample purification and analysis
- Molecular biology techniques (RNA and DNA purification, qPCR, Real-Time PCR, ddPCR, Viability Assays (Live&Dead, MTT), Western blot, Immunofluorescence, CRISPR-cas9 and RNA pulldown).
- Cell biology techniques (Cell culture, Transfection of SH-SY5Y cells, RNA interference, isolation of PBMCs from peripheral blood and buffy coats)
- Computer skills: ability to use Biorender ; ability to collect, analyze and present data with Office package (Word, Excel, PowerPoint and Access).



CONTRIBUTIONS TO SCIENCE

- *RNA-seq characterization of sex-differences in adipose tissue of obesity affected patients: computational analysis of differentially expressed coding and non-coding RNAs.*
Rey F, Messa L, Pandini C, **Maghraby E**, Barzaghini B, Garofalo M, Micheletto G, Raimondi MT, Bertoli S, Cereda C, Zuccotti GV, Canello R, Carelli S. JPM, MDPI, April 2021, 10.3390/jpm11050352.
- *Oxygen sensing in neurodegenerative diseases: current mechanisms, implication of transcriptional response and pharmacological modulation.*
Rey F, Messa L, **Maghraby E** et al. In review for "Antioxidants and Redox Signalling".
- *Role of lncRNAs molecules in adipogenic differentiation: focus on four sense/antisense pairs*
Rey F, Messa L, **Maghraby E**, Launi R, Barzaghini B, Colli M, Raimondi MTR, Zuccotti GV, Carelli S. In preparation.
Rey F, Messa L, Pandini C, **Maghraby E**, Barzaghini B, Garofalo M, Micheletto G, Raimondi MT, Bertoli S, Cereda C, Zuccotti GV, Canello R, Carelli S. JPM, MDPI, April 2021, 10.3390/jpm11050352.
- *Implications for the lncRNA ZEB1-AS1 in sporadic ALS: deregulation in neuronal differentiation and characterization of a novel disease pathway.*
Rey F, Pandini C, Barzaghini B, **Maghraby E** et al. In preparation.



ABSTRACTS

- *Study of the oncogenic lncRNA ZEB1-AS1 in sporadic ALS: implication for neuronal differentiation and identification of a novel disease pathway.*
Rey F, Pandini C, Maghraby E, Gagliardi S, Zuccotti GV, Cereda C, Carelli S, 3rd BraYn, Virtual Congress, 25-26 November 2020.
- *Role of the lncRNA ZEB1-AS1 in sporadic ALS: deregulation in neuronal differentiation and characterization of a novel disease pathway.*
Rey F, Pandini C, Maghraby E, Barzaghini B, Bordoni M, Raimondi M, Pansarasa O, Gagliardi S, Cereda C, Zuccotti V, Carelli S. ENCALS - European network to cure ALS, VirtualCongress, 12-14 May 2021.



LANGUAGES

Mother tongue Italian

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	B2	B2	B2	B2
French	B1	B1	B1	B1	B1