

Curriculum Vitae

Prof. Maria Cristina Albertini

General Pathology

University of Urbino Carlo Bo

Department of Biomolecular Sciences (DISB)

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Email:

1. Education

1992: Degree in Biological Sciences, University of Urbino “Carlo Bo”, Pesaro-Urbino Italy.

1992-1993: Research Fellow, Department of Diabetes and Metabolism, St. Bartholoeuw’s Hospital of London, UK.

1993: First Certificate in English, English Understanding, Speaking and Writing, University of Cambridge, London, UK.

1994-1998: PhD in Biochemical and Pharmacological Methodolies, Institute of Biological chemistry, University of Urbino “Carlo Bo”, Pesaro-Urbino, Italy.

1999-2001: Post-Doc Fellow, University of Urbino “Carlo Bo”, Pesaro-Urbino, Italy.

2001-2005: Research Fellow, University of Urbino “Carlo Bo”, Pesaro-Urbino, Italy.

2007-2008: Acting Professor of Biochemistry, University Campus-Biomedico of Rome, Rome, Italy.

2008-2021: Reseracher on General Pathology (MED04), University of Urbino “Carlo Bo”, Department of Biomolecular Sciences, School of Pharmacy. Pesaro-Urbino, Italy.

2021-at present: Associate Professor on General Pathology (MED04), University of Urbino “Carlo Bo”, Department of Biomolecular Sciences, School of Pharmacy. Pesaro-Urbino, Italy.

2. Academic courses

- Assistant Professor of Idrology of the faculty of pharmacy at the University of Urbino “ Carlo Bo” (1999-00).
- Assistant Professor of General Pathology of the faculty of pharmacy at the University of Urbino “ Carlo Bo”(1998-2003) and (2001-02).

- Professor of “Biochemistry” at the University Campus Bio-Medico of Rome, faculty of Medicine presso (A.A. 2007-08).

- Professor of General Pathology and systemic Pathology of the faculty of pharmacy at the University of Urbino “ Carlo Bo” (A.A. 2008/2009); (A.A. 2009/2010); (A.A. 2010/2011); (A.A. 2011/2012); (A.A. 2012/2013).

- Professor of the courses of Idrology and Mineral water for therapeutic use, of the faculty of pharmacy at the University of Urbino “ Carlo Bo” (A.A. 2009/2010); (A.A. 2010/2011) and (A.A. 2011/2012).

- Professor of General Pathology (Fysiopathology of digestive processes), of the faculty of pharmacy at the University of Urbino “ Carlo Bo” (A.A. 2009/2010); (A.A. 2010/2011) and (A.A. 2011/2012).

- Professor of the course of Animal Biology of the faculty of pharmacy at the University of Urbino “ Carlo Bo” (A.A. 2010/2011).
- Professor of Applied Biochemistry and General pathology with clinical terminology; and of Microbiology and General pathology with clinical terminology, of the School of pharmacy at the University of Urbino “ Carlo Bo” (A.A. 2012/2013).
- Professor of Applied Biochemistry and General pathology with clinical terminology; and of Microbiology and General pathology with clinical terminology, of the School of pharmacy at the University of Urbino “ Carlo Bo” (A.A. 2013/2014).
- Professor of Patologia generale at the School of pharmacy and Patologia generale con Nozioni di Terminologia Medica at the school of Biological sciences at the University of Urbino “ Carlo Bo”; (A.A. 2015/2016).
- Professor of Patologia generale at the School of pharmacy and Patologia generale con Nozioni di Terminologia Medica at the school of Biological and Biotechnological sciences at the University of Urbino “ Carlo Bo”; (A.A. 2016/2017).
- Professor of Patologia generale at the School of pharmacy and Patologia generale con Nozioni di Terminologia Medica at the school of Biological and Biotechnological sciences at the University of Urbino “ Carlo Bo”; (A.A. 2017/2018).
- Professor of Patologia generale at the School of pharmacy and Patologia generale con Nozioni di Terminologia Medica at the school of Biological and Biotechnological sciences at the University of Urbino “ Carlo Bo”; (A.A. 2018/2019).
- Professor of Patologia generale at the School of pharmacy and Patologia generale con Nozioni di Terminologia Medica at the school of Biological and Biotechnological sciences at the University of Urbino Carlo Bo; (A.A. 2019/2020).
- Professor of Patologia generale at the School of pharmacy and Patologia generale con Nozioni di Terminologia Medica at the school of Biological and Biotechnological sciences at the University of Urbino Carlo Bo; (A.A. 2020/2021).
- Professor of Patologia generale at the School of pharmacy and Patologia generale con Nozioni di Terminologia Medica at the school of Biological and Biotechnological sciences at the University of Urbino Carlo Bo; (A.A. 2021/2022).

3. Main research activities and responsibilities

The most recent research activities are focused on the modulation of microRNAs in healthy/unhealthy conditions: inflammatory conditions, neurodegenerative diseases and pregnancy associated pathogenesis (neonate preterm hypoxia). Further important research interests focus on the involvement of microRNAs as markers of inflammation and aging, as well as on the investigation on anti-senescence activity of natural compounds contained in food. She developed a bioinformatics tool to predict microRNA modulation in diseases and define their functions. Maria Cristina is experienced in microRNAs qRT-PCR analysis, spectrofluorimetry, cytofluorimetry, cytometry, transcriptomic and *in silico* analysis as microRNA modulation prediction tool.

She developed an innovative image analysis technique for biomedicine (efficient health system). Studies on various aspects of red blood cell structure and function, including: isolation and characterisation of erythrocyte enzymes; the regulation of glucose metabolism; erythrocyte function under both normal conditions and under conditions of circulatory stress (during physical exercise) and environmental stress (exposure to electromagnetic fields); the role of phospholipidic components of the cell membrane in the interactions with the cytoskeleton.

Research management and activity on new drugs testing for anti-cancer therapy. Description of the effects of Melatonin and Analogues on cell death and inflammation processes. Environmental protection, food quality, cancer therapy. Involved on studies on the biological effects of electromagnetic fields and other environment stressors on animal cells, studies on the antioxidant activity of different plant-derived substances; studies on the effect of chemical and physical effectors on apoptosis.

Research activities on Diabetes prevention (disease incidence reduction and therapy). Diabetes prevention (disease incidence reduction and therapy).

Other activities were also related to quality of drinking mineral water and clinical water therapy, mineral water effects on mice, rats and Humans. Science applied to public health (mineral water therapy, food biochemistry). On May 1996 awarded: Certificate on "Abilitazione all'esercizio della professione di Biologo". Clinical laboratory analysis. Biochemical techniques for research activity using most relevant techniques used in biochemistry (HPLC, electrophoresis, enzyme activity, etc).

Management and administration of a research project: starting from the identification of national and international (EU projects) resources for research funding; the creation and management of a research group; the good laboratory and manufacturing practice (GLP and GMP); the creation of "spin off"; the ability to identify milestones, deliverables; research management; to elaborate intermediate and final reports and audit certificates.

Member of the European Network COST Action Transautophagy supported by COST (European Cooperation in Science and Technology).

- co-PI of a grant supported by the Thrasher Foundation entitled: Melatonin as a neuroprotective therapy in neonates with HIE undergoing hypothermia".

Peer Review:

- Peer reviewer for different journals: International Journal of Radiation Biology, FASEB J.; Natural Product Research; Bioelectromagnetics, Genes and Nutrition.

- Lead guest editor of the journal "Oxidative stress and cellular longevity" for the special issue on: Transautophagy: Research and Translation of Autophagy Knowledge.

- Editor of the "PeerJ" journal.

- Editor of Antioxidants

Citation Index, H index (google scholar):

The results of the investigations have been published in more than 70 international peer reviewed papers.
h-index = 32

https://scholar.google.com/citations?hl=it&user=LmyIk_0AAAAJ&view_op=list_works&sortby=pubdate

Urbino, 06/09/2021

Maria Cristina Albertini