

Chiara Rita Inguscio

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Current Position

October 2021 – ongoing **PHD STUDENT IN NANOSCIENCE AND ADVANCED TECHNOLOGIES, UNIVERSITY OF VERONA**

- “Morphological and Clinical Nanomedicine” curriculum, dept. of Neurosciences, Biomedicine and Movement sciences – Anatomy and Histology section
- Supervisor: Professor Manuela Malatesta

Education

October 2017 – May 2020 **MASTER DEGREE IN EXPERIMENTAL AND APPLIED BIOLOGY, BIOMEDICAL AND MOLECULAR SCIENCES CURRICULUM, UNIVERSITY OF PAVIA**

- Experimental thesis: “Novel cisplatin compounds: immunocytochemical, ultrastructural and molecular analysis of the *in vitro* effects induced on Glioblastoma Multiforme cell line U251”.
- Supervisor: Professor Maria Grazia Bottone

October 2014 – December 2017 **BACHELOR DEGREE IN BIOLOGY, UNIVERSITY OF PAVIA**

- Experimental thesis: “*In vitro* culture techniques of *Verbascum olympicum* L.: callus induction and plant micropropagation”.
- Supervisor: Professor Erik Nielsen

June 2013 **HIGH SCHOOL DIPLOMA, INSITUTE “D. CELERI”, LOVERE (BG)**

Work experience

May 2021 – September 2021 **RESEARCH FELLOWSHIP, UNIVERSITY OF PAVIA**

- Cell Biology and Neurobiology Laboratory (Biology and Biotechnology dept. “L. Spallanzani”) and Legal Medicine and Forensic Sciences Unity (Public Health and experimental and forensic Medicine dept.)
- Supervisor: Professor Carlo Previderè.
- Research topic: Iron metabolism, oxidative stress, cell death by ferroptosis on asbestos induced carcinogenesis: study on autopsy samples and cell lines.

October 2020 – May 2021 **RESEARCH ACTIVITY, UNIVERSITY OF PAVIA**

- Cell Biology and Neurobiology Laboratory (Biology and Biotechnology dept. “L. Spallanzani”)
- Supervisor: Professor Maria Grazia Bottone.
- Research topics: Novel cisplatin compounds and their employment in chemotherapy; oxidative stress profile of Anorexia Nervosa patients blood samples.

October 2018 – May 2020 **MASTER THESIS INTERNSHIP, UNIVERSITY OF PAVIA**

- Cell Biology and Neurobiology Laboratory (Biology and Biotechnology dept. “L. Spallanzani”)
- Supervisor: Professor Maria Grazia Bottone.

February 2018 – September 2018 **RESEARCH ACTIVITY, IGM CNR PAVIA**

- Histochemistry and Cytometry laboratory, IGM-CNR di Pavia
- Supervisors: Doctor Anna Cleta Croce and Professor Giovanni Bottiroli
- Research topic: Development of new optical techniques and methods for basic biology and biomedical applications

March 2017 – December 2017 **BACHELOR THESIS INTERNSHIP, UNIVERSITY OF PAVIA**

- Plant Biochemistry laboratory, Biology and Biotechnology dept. “L. Spallanzani”
- Supervisor: Professor Erik Nielsen

Teaching experience

- A.A. 2021/2022, 2022/2023 **Teaching assistant in Human Anatomy (BIO/16), bachelor degree in Sport and Exercise sciences, University of Verona**
- A.A. 2020/2021 **Cytology and Histology mentoring, bachelor degree in Biological Sciences, University of Pavia**
- A.A. 2019/2020 **Neurogenesis and Comparative Neuromorphology mentoring, master degree in Neurobiology, University of Pavia**

Training experience

April 2023 Practical course: use of animals in experimental research, Charles River Italia
· Modules: "Basic Biology"; "Euthanasia"; "Minimal invasive procedures without anaesthesia".
· Species: mouse, rat.

October 2022 Theoretical course: use of animals in experimental research, IZSLER Brescia
· Modules: "National legislation and ethics"; "Management and biology of rodents and lagomorphs"; "Ethics and project design".

May 2019 Cell Culture specialisation course, IZSLER Brescia
· Theory and practice of cell culture in research and diagnostic applications.

Skills

- Technical skills** Cell cultures
Cytology samples preparation: fixation, viability assays, immunocytochemistry
Sample preparation for flow cytometry
Blood samples processing
Brightfield microscopy and histology samples setup: fixation, paraffin embedding, microtome cut, hematoxylin-eosin staining, immunohistochemistry
Fluorescence microscopy
Transmission electron microscopy and sample setup: fixation, resin embedding, semithin cut, immunocytochemistry, staining (lead citrate, uranylLess)
Protein extraction
Western Blot
- IT skills** Microsoft Office
Softwares: Adobe Photoshop, Image J, GraphPad
Databases: NCBI, UCSC, UniProt, STRING, OMIM, Ensembl, KEGG, BLAST
- Language** Italian: mother tongue
English: level B2 (Cambridge FCE)

Publications

Inguscio CR, Cisterna B, Carton F, Barberis E, Manfredi M, Malatesta M. Modifications of Blood Molecular Components after Treatment with Low Ozone Concentrations. *International Journal of Molecular Sciences*. 2023; 24(24):17175. <https://doi.org/10.3390/ijms242417175>

Inguscio CR, Cisterna B, Lacavalla MA, Donati F, Angelini O, Tabaracci G, & Malatesta M. Ozone and procaine increase secretion of platelet-derived factors in platelet-rich plasma. *European Journal of Histochemistry*. 2023, 67(4). <https://doi.org/10.4081/ejh.2023.3879>

Inguscio CR, Lacavalla MA Cisterna B, Zancanaro C, Malatesta M. Physical Training Chronically Stimulates the Motor Neuron Cell Nucleus in the Ts65Dn Mouse, a Model of Down Syndrome. *Cells* 2023, 12, 1488. <https://doi.org/10.3390/cells12111488>

Inguscio CR, Dalla Pozza E, Dando I, Boschi F, Tabaracci G, Angelini O, Picotti PM, Malatesta M, Cisterna B. Mitochondrial Features of Mouse Myoblasts Are Finely Tuned by Low Doses of Ozone: The Evidence In Vitro. *International Journal of Molecular Sciences*. 2023; 24(10):8900. <https://doi.org/10.3390/ijms24108900>

Lacavalla MA, Inguscio CR, Cisterna B, Bernardi P, Costanzo M, Galiè M, Scambi I, Angelini O, Tabaracci G and Malatesta M. Ozone at low concentration modulates microglial activity in vitro: A multimodal microscopy and biomolecular study. *Microscopy research and technique* 2022 10.1002/jemt.24233. Advance online publication. <https://doi.org/10.1002/jemt.24233>

Congress participations

Inguscio CR, Malatesta M. Transmission Electron Microscopy methods to reveal nanoparticles inside cells. (2023) NANO23@uniVR - 8-9 June 2023, University of Verona, Italy.

Inguscio CR, Ferrari B, Priori EC, De Luca F, Ratto D, Di Iorio C, Veneroni P, Desiderio A, Angelone P, Mazzini G, Ravera M, Savino E, Roda E, Rossi P and Bottone MG. A dietary Ganoderma lucidum-based supplementation as a chemotherapeutic adjuvant therapy in glioblastoma. (2021). XXXIX Conferenza Nazionale di Citometria (GIC) (digital conference).

Priori EC, De Luca F, Inguscio CR, Ferrari B, Ratto D, Di Iorio C, Desiderio A, Angelone P, Savino E, Bottone MG, Rossi P and Roda E. Oxidative stress and neuroinflammation effects in hippocampal development, ageing, and disease. (2021). XXXIX Conferenza Nazionale di Citometria (GIC) (digital conference).

De Luca F, Di Iorio C, Ratto D, Priori EC, Favaron C, Inguscio CR, Ferrari B, Savino E, Roda E, Bottone MG and Rossi P. New molecular targets for overcoming drug resistance in triple negative breast cancer. (2021). XXXIX Conferenza Nazionale di Citometria (GIC) (digital conference).

Ciamarone F, Ferrari B, Ciocca M, Carnevale F, Inguscio CR, Facoetti A, Bottone MG. Study of cytotoxic effects induced by carbon ions irradiation on U251 Glioblastoma cell line after treatment with a new platinum(IV)-based prodrug. (2020). 45th Annual Meeting European Radiation Research Society. 13th - 17th September, Lund, Sweden (digital conference).