

Curriculum Vitae

Fabrizio De Luca

WORK EXPERIENCE

March – Present Research associate carrying out research, teaching, supplementary teaching and student service activities related to the analysis of the nutraceutical properties of Voghera sweet pepper to study the beneficial effects on human and animal health with molecular, biochemical, physiological and microscopic techniques, in *in vivo* and *in vitro* models.

January 2022 – February 2023 Technical, scientific and data processing areas. Scientific technical staff in microscopy. Category D, full-time, permanent job. University of Milan. Department of Veterinary Medicine and Animal Science. Lodi, via dell'Università 6, 26900.

Main activities and responsibilities:

- Participation in the instrumental technical management of the microscopy laboratories of the Department and execution of related research;
- Identify viscera of domestic, wild and laboratory animals for performing sampling of cells, tissues and organs;
- Perform histological and cytological preparations (fixation, inclusion, cutting, staining) for morpho-functional studies of light, fluorescence and confocal microscopy;
- Evaluate light, fluorescence and confocal preparations;
- Immunocyte/histochemistry;
- Use of probes/fluorochromes and immunofluorescence techniques;
- Histometric quantification and image processing techniques;
- Use of the main computer systems (Office package and more widespread applications), of programs for statistical analysis and consultation of databases;
- Molecular biology;
- Management and maintenance of optical, fluorescence and confocal microscopes;
- Use of microtomes and cryostats and their routine maintenance;
- Histological, histochemical, immunohistochemical and immunofluorescence stains;
- Harvesting and processing of organs/tissues and qualitative and quantitative study of preparations through tools for image analysis and related statistical analysis with dedicated programs.

2022 - Present Ordinary member of the Italian Association of Veterinary Morphologists.

2018 – 2019 Graphic collaborator for De Agostini Scuola SpA. Realization of drawings to be included in the work entitled “Citologia e Istologia”. Authors: Maria Grazia Bottone, Marco Biggiogera. Editor UTET UNIVERSITA.

First session 2018 Qualified as a Professional Biologist (SEZ.A).

University of Palermo. Piazza Marina, 61, 90133.

April 2018 – September 2018 Volunteer researcher.

Cell Biology and Neurobiology laboratory, Biology and Biotechnology department.

University of Pavia, Via Ferrata 9, 27100.

EDUCATION AND TRAINING

March 2022 PhD degree in Genetics, Molecular and Cellular Biology - Ciclo XXXIV.

Cell Biology and Neurobiology laboratory, Biology and Biotechnology department.

University of Pavia, Via Ferrata 9, 27100.

- Thesis title: “In vivo evaluation of the neuroprotective effects of a

medicinal mushroom blend on breast metastases: cellular and molecular studies in CNS and lung”.

2019 – 2020 Acquisition of university formative credits (24 CFU) for teaching (CS24).

Università per stranieri Dante Alighieri, Reggio di Calabria.

April 2018 Master's Degree in Neurobiology. *110/110 cum laude*.

University of Pavia. Via Ferrata 9, 27100.

- Thesis title: “Evaluation of the neurotoxic effects of platinum compounds on the rat cerebellum during development: inflammatory and oxidative stress pathways”.

October 2015 Bachelor's degree in Biological Sciences.

University of Palermo. Piazza Marina, 61, 90133.

- Thesis title: “Retinal Pigment Epithelium induced pluripotent stem cells”

July 2006 Scientific High School Diploma.

“M. Cipolla” Scientific high school of Castelvetro (TP),

Piazzale Placido Rizzotto, 91022.

PERSONAL SKILLS AND COMPETENCES

Mother tongue: Italian

Other languages: English

- Reading skills: Good
- Writing skills: Good
- Verbal skills: Good

Social skills and competencies: Excellent attitude to communicate, flexibility and willingness to cooperate with colleagues, sunny, good-tempered, excellent ability to built good working relationship.

Organizational skills and competencies:

- Attitude to enterprising, self-management, and ability in coordinating activity and team working.
- Analytical skills.
- Flexibility and willingness to cooperate with colleagues.
- Good judgment and autonomous decision-making

Technical skills and competencies, applied both in *in vivo* and *in vitro* models:

- Manipulation and experimental procedures on *in vivo* models
- Chemical and physical fixation, inclusion and preparation of histological samples
- Microtomy and cryostat cut
- Preparation of slices of brain tissue and several histological samples
- Immunocytochemistry/histochemistry
- Cytological and histological stains
- Microscopy techniques of cell biology and histology
- Use of optical and fluorescence microscope
- Use of confocal microscope
- Use of polarized light microscope
- Use of inverted microscope
- Knowledge of Cell^F Multi-fluorescence and imaging Software
- Knowledge of Preview Software
- Knowledge of Fluoview Software
- PCR from fresh frozen tissue and FFPE (formalin fixed paraffin embedded) tissue
- Knowledge of Oxidative stress, inflammation and cell death pathways

- Histology and cytology of the central nervous system and organs of vertebrates
- Data analysis and statistical processing

Other skills and competencies:

- Images creation using vector graphics software
- Knowledge Paint shop, Photoshop, Inkscape, Blender, Scribus, Image J
- Knowledge of C. and html
- Knowledge of Windows, Mac OS X, Linux
- Knowledge of Office Package (Microsoft Excel, Microsoft PowerPoint, Microsoft Word, Microsoft Access)

CHIEF SCIENTIFIC ACTIVITIES

The main scientific interests/fields related to the ongoing research activity are the following:

1. Phytotherapy:

Characterization, through focused and interdisciplinary scientific research, of the biological activity of different Voghera sweet pepper (PEPVO) extracts, at different ripeness degrees, and its waste (seeds, petiole and placenta), with the aim of identifying biologically active molecules to be tested in *in vitro* studies on human fibroblasts (NHDF), thyroid cells and glial/neuronal cells, focusing on specific involved pathways, i.e. inflammation, oxidative stress and cell death, in order to develop food supplements and/or nutraceutical foods aimed at human well-being.

2. Oncology: adjuvant treatments and conventional therapy

The preventive and therapeutic effect of chemical-characterized medicinal mushrooms (MMs) (also in blend), to be employed as useful adjuvant treatments in the field of Integrative Oncology, are under investigation using a 4T1 tumor-bearing syngeneic murine model. In particular, the focus was and is still on the effects of the different MM supplement on inflammation, oxidative stress and cell death pathways in different organs, i.e. lung and cerebellum, being these latter the principal distant metastatic areas.

Concerning conventional protocols, with the goal to identify novel effective therapeutic strategies to be used in the field of clinical neuro-oncology, improving patients' prognosis and quality of life, also reducing adverse side effects, in view of a focused, personalized medicine, diverse new lab-synthesised chemotherapeutics are under evaluation. In particular, the efficacy/adverse effects of a new platinum complex (i.e. PtAcacDMS), compared to the most employed chemotherapeutic agents (i.e. Cisplatin) have been and still are under investigation focusing on specific involved pathways, e.g. inflammation, oxidative stress and cell death in the cerebellum.

3. Neuroscience

The effects of different substances, i.e. chemotherapeutics, MMs and new psychoactive substances (NPS), on different target brain areas have been and are still under investigation. Histochemical and behavioural aspects together with immunocytochemical evaluation of crucial pathways, i.e. inflammation, oxidative stress and cell death, as well as modulation of neurotransmission are evaluated. This research has been and is still carried out using both *in vitro* as well *in vivo* models.

4. Aging

After the development of a murine model of physiological aging, the effects of MM supplementation extract in preventing the cognitive decline during aging by behavioural studies and immunohistochemical evaluations, focusing on different CNS areas, in particular studying morphological features and potential alteration/modification of key pathways. Further studies are investigating the gut-brain axis in frail mice to assess the beneficial action of MM extracts. Behavioural studies will be complemented by gut microbiome composition investigations still ongoing (by bacterial DNA extraction and 16s rRNA sequencing), paralleled by

immunohistochemical evaluations devoted to identifying BBB integrity/maintenance and Choroid Plexus status.

TEACHING EXPERIENCES

- 2022-2023** Lesson entitled “Immunochemistry, microscopy and fluorescence”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2023** Commission member in “TOLC - Test online per l'ingresso all'università – CISIA”.
University of Milan.
- 2022** Commission member in “TOLC - Test online per l'ingresso all'università – CISIA”.
University of Milan.
- 2021 – 2022** Online lesson entitled “Citoscheletro”.
Bachelor's degree in Biological Sciences, Department of Biology and Biotechnology "L. Spallanzani
", University of Pavia.
- 2020 – 2021** Lesson entitled “Nuove sostanze psicoattive e cervelletto”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2020 – 2021** Online lesson entitled “Tecniche di Microscopia”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2020 – 2021** Online lesson entitled “Corteccia cerebrale”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2020 – 2021** Tutor in “Cytology and histology, individual exercises under an optical microscope for
the observation of histological preparations from different vertebrate species”.
Bachelor's degree in Biological Sciences, Department of Biology and Biotechnology "L. Spallanzani
", University of Pavia.
- 2020 – 2021** Tutor in “Neurogenesis and Comparative Neuromorphology”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2020** Teaching assistant for all the teachings relating to the **SSD BIO/06**. Comparative anatomy and
cytology.
University of Pavia, Via Ferrata 9, 27100.
- 2019 – 2020** Online lesson entitled “Corteccia cerebrale”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2019 – 2020** Lesson entitled “Tecniche di Microscopia”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2019 – 2020** Lesson entitled “Effetti neurotossici di composti del platino sul cervelletto di ratto
durante lo sviluppo”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.
- 2019 – 2020** Tutor in “Cytology and histology, individual exercises under an optical microscope for
the observation of histological preparations from different vertebrate species”.
Bachelor's degree in Biological Sciences, Department of Biology and Biotechnology "L. Spallanzani
", University of Pavia.
- 2019 – 2020** Tutor in “Neurogenesis and Comparative Neuromorphology”.
Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ",
University of Pavia.

2018 – 2019 Lesson entitled “Tecniche di Microscopia”

Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

2018 – 2019 Tutor in the national plan scientific degrees "Biology and biotechnology”.

Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

2018 – 2019 Tutor in “Cytology and histology, individual exercises under an optical microscope for the observation of histological preparations from different vertebrate species”.

Bachelor's degree in Biological Sciences, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

2018 – 2019 Tutor in “Neurogenesis and Comparative Neuromorphology”.

Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

2017 – 2018 Tutor in “Neurogenesis and Comparative Neuromorphology”.

Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

Thesis co-supervisor:

2022-2023 “A promising new adjuvant for the treatment of cerebellar metastases: effects of a beta-glucan extract obtained from a medicinal mushroom blend on inflammatory and oxidative stress pathways in secondarisms from triple-negative breast cancer”. Candidate: Annalaura Mezzullo. Supervisor: Prof. Elisa Roda. Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

2020-2021 “Effects of the new synthetic cannabinoid AKB-48 (APINACA) on endocannabinoid and serotonergic pathways in the cerebellum. Morphological and immunohistochemical study in mouse model.”. Candidate: Angela Di Maro. Supervisor: Prof. Elisa Roda. Master's degree in Neurobiology, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

2018-2019 “Study of lung metastasis in mouse after synergic implantation of triple negative breast cancer”. Candidate: Maria Teresa Venuti. Supervisor: Prof. Paola Rossi. Bachelor's degree in Biological Sciences, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

2017-2018 “Correlation of physiological and behavioural parameters with increased oxidative stress in patients with obesity before and after nutritional rehabilitation”. Candidate: Manuela Borin. Supervisor: Prof. Maria Grazia Bottone. Bachelor's degree in Biological Sciences, Department of Biology and Biotechnology "L. Spallanzani ", University of Pavia.

EDITORIAL ACTIVITY

2024 – Present Guest Co-Editor for the special issue “Natural Products: New Insights into Overcoming Oxidative Stress in Pathological Diseases”

2023 – Present Topical Advisory Panel Member for the Current Issues in Molecular Biology journal.

2023 – Present Reviewer for international scientific journals including: Applied Sciences, Molecules, Cells and International Journal of Molecular Sciences.

COURSES AND CONFERENCES

2023 Participation in “I DIBATTITI APERTI NELLA SPERIMENTAZIONE ANIMALE: FORMAZIONE E AGGIORNAMENTO PROFESSIONALE DALLA TEORIA ALLA PRATICA - Edizione Unica, 4 CFP”.

Held on IZSLER - Brescia.

2023 Participation in “PRATICAL FUNCTION A, 3.2 Basic and appropriate biology, 6.2 Humane methods of killing, 8 Minimally invasive procedures without anaesthesia, Mouse, 6 CFP”.

Held on Charles River Italia, Calco, Lecco.

2023 Participation in “ETICA E CONCESSIONE DEI PROGETTI, MODULI 9, 10, 11, DM 5 AGOSTO 2021 - Edizione Unica, 6 CFP”.

Held on IZSLER - Brescia.

2023 Participation in “LEGISLAZIONE NAZIONALE ED ETICA LIVELLO 1, MODULI 1 E 2, DM 5 AGOSTO 2021 - 1^a Edizione, 5 CFP”.

Held on IZSLER - Brescia.

2023 Participation in “BIOLOGIA E GESTIONE DEGLI ANIMALI DA LABORATORIO, MODULI 3.1, 4, 5, 6.1, 7. DM 5 AGOSTO 2021 RODITORI E LAGOMORFI - 1^a Edizione, 21 CFP”.

Held on IZSLER - Brescia.

2019 Participation in “TRAINING COURSE FOR THE USE OF ANIMALS FOR SCIENTIFIC OR EDUCATIONAL PURPOSES - 1 GENERAL PART: BASIC REGULATIONS, ETHICS AND 3R - 1st Edition”.

Held on IZSLER - Brescia.

2019 Participation in “THEORETICAL-PRACTICAL LESSONS FOR THE DEEPENING OF THE USE OF CELL CULTURES IN THE FIELD OF BASIC RESEARCH AND DIAGNOSTICS”.

Held on IZSLER - Brescia.

2019 Participation in “STATISTICAL MODELS USEFUL IN BIOMEDICAL AND BEHAVIOURAL RESEARCH – A “HAND ON” APPROACH EXPLOITING THE PACKAGE “R””.

Held on University of Pavia, Pavia.

2017 – 2018 Participation in the "Training course for tutoring collaborators”.

University of Pavia.

2016 – 2017 Participation in "Seminari in neurobiologia”.

University of Pavia.

2016 Participation in "Big data for neuroscience" conference.

University of Pavia.

2015 – 2016 Participation in "Seminari in neurobiologia”.

University of Pavia.

ONGOING RESEARCH PROJECTS (2018 – Present)

The research activity, together with the laboratory of Prof. Bottone MG, has made use of collaboration with different laboratories researching on:

Mycotherapeutic and phytotherapeutic supplement in aging and oncology:

Prof. Rossi P (Neurobiology and Integrated Physiology Laboratory, Department of Biology and Biotechnology “L. Spallanzani”, University of Pavia, Pavia);

Prof Savino E (Department of Earth and Environmental Sciences, University of Pavia, Pavia).

Evaluation of novel psychoactive substances in vitro and in vivo:

Prof. Roda E (Lab of Clinical & Experimental Toxicology, Pavia Poison Centre-CNIT, Toxicology Unit, ICS Maugeri Spa, IRCCS Pavia);

Prof. Marti M (Forensic Toxicology Laboratory, Department of Translational Medicine, LTTA Center, University of Ferrara, Italy).

NeLoM, “Dal suino nero in Lombardia al suino Nero di Lomellina”:

Prof. Di Giancamillo A (University of Milan, Department of Biomedical Sciences for Health);

Prof. Modena S (University of Milan. Department of Veterinary Medicine and Animal Science).

Anorexia Nervosa - crowdfunding project “la felicità non ha peso”:

Prof. Balottin U (Operative unit of child neuropsychiatry of the Mondino Institute, Pavia);
Prof. Dossena M (Laboratory of Pharmacobiochemistry, Department of Biology and Biotechnology “L. Spallanzani”, University of Pavia, Pavia);

Dr. Andriulo A and Dr. Rancati G (“Casa di Cura Villa Esperia”, Salice Terme).

The Blood-Brain Barrier on autaptic specimens of patients with Anorexia Nervosa, Obesity and neurodegenerative diseases:

Prof. Osculati A and Dr. Visonà S (Department of Public Health, Experimental and Forensic Medicine, Unit of Legal Medicine and Forensic Sciences “Antonio Fornari” of University of Pavia).

Prolidase deficiency in mouse model during post-natal brain development:

Prof. Forlino A and Dr. Besio R (Department of Molecular Medicine, Biochemistry Unit, University of Pavia, Pavia).

Evaluation of new platinum compounds in vitro and in vivo:

Prof. Roda E (Lab of Clinical & Experimental Toxicology, Pavia Poison Centre-CNIT, Toxicology Unit, ICS Maugeri Spa, IRCCS Pavia);

Prof. Rossi P (Neurobiology and Integrated Physiology Laboratory, Department of Biology and Biotechnology “L. Spallanzani”, University of Pavia, Pavia);

Dr. Facoetti A (National Centre for Cancer Treatment, CNAO, Pavia).

Evaluation of exposure to nanoparticles in vivo:

Prof. Biggiogera M (Lab. of Cell Biology and Neurobiology, Department of Biology and Biotechnology “L. Spallanzani”, University of Pavia, Pavia);

Prof. Roda E (Lab of Clinical & Experimental Toxicology, Pavia Poison Centre-CNIT, Toxicology Unit, ICS Maugeri Spa, IRCCS Pavia).

Delivery of liposomal forms of doxorubicin in vitro and in vivo:

Prof. Bertone V (Lab. Of Comparative Anatomy and Cytology, Department of Biology and Biotechnology “L. Spallanzani”, University of Pavia, Pavia).

My research activity is confirmed by n. 17 scientific publications and n. 19 congress communications (Scopus: h.index 7 – citations 158).

SCIENTIFIC PUBLICATIONS

Grimaldi M*, Bo VD*, Ferrari B, Roda E, **De Luca F**, Veneroni P, Barni S, Verri M, De Pascali SA, Fanizzi FP, Bernocchi G, Bottone MG. Long-term effects after treatment with platinum compounds, cisplatin and [Pt(O,O'-acac)(γ -acac)(DMS)]: Autophagy activation in rat B50 neuroblastoma cells. **Toxicology and Applied Pharmacology**. 2019 (*Both co-first author). 1;364:1-11. doi: 0.1016/j.taap.2018.12.005.

Ratto D, Corana F, Mannucci B, Priori EC, Cobelli F, Roda E, Ferrari B, Occhinegro A, Di Iorio C, **De Luca F**, Cesaroni V, Girometta C, Bottone MG, Savino E, Kawagishi H, Rossi P. Hericium erinaceus Improves Recognition Memory and Induces Hippocampal and Cerebellar Neurogenesis in Frail Mice during Aging. **Nutrients**. 2019. 27;11(4):715. doi: 10.3390/nu11040715.

Ferrari B, Camuso S, Priori EC, **De Luca F**, Roda E, Osella D and Bottone MG. Pt(IV)Ac-POA: New Platinum Compound Induced Caspase Independent Apoptosis In B50 Neuroblastoma Stem Cells. **Journal of Embryology & Stem Cell Research**. 2019. 3. doi: 10.23880/JES-16000125.

Ratto D, Ferrari B, Roda E, Brandalise F, Siciliani S, **De Luca F**, Priori EC, Di Iorio C, Cobelli F, Veneroni P, Bottone MG, Rossi P. Squaring the Circle: A New Study of Inward and Outward-Rectifying Potassium Currents in U251 GBM Cells. **Cellular and Molecular Neurobiology**. 2020. 40(5):813-828. doi: 10.1007/s10571-019-00776-3.

- Roda E *, **De Luca F***, Di Iorio C, Ratto D, Siciliani S, Ferrari B, Cobelli F, Borsci G, Priori EC, Chinosi S, Ronchi A, Franco R, Di Francia R, Berretta M, Locatelli CA, Gregori A, Savino E, Bottone MG, Rossi P. Novel Medicinal Mushroom Blend as a Promising Supplement in Integrative Oncology: a Multi-tiered Study using 4T1 Triple-Negative Mouse Breast Cancer Model. **International Journal of Molecular Sciences**. 2020 (*Both co-first author). 14;21(10):3479. doi: 10.3390/ijms21103479.
- Roda E*, **De Luca F***, Locatelli CA, Ratto D, Di Iorio C, Savino E, Bottone MG, Rossi P. From a Medicinal Mushroom Blend a Direct Anticancer Effect on Triple-Negative Breast Cancer: A Preclinical Study on Lung Metastases. **Molecules**. 2020 (*Both co-first author). 18;25(22):5400. doi: 10.3390/molecules25225400.
- Viale M, Bertone V, Maric I, Cilli M, Emionite L, Bocchini V, Ponzoni M, Fontana V, **De Luca F**, Rocco M. Enhanced therapeutic index of liposomal doxorubicin Myocet locally delivered by fibrin gels in immunodeficient mice bearing human neuroblastoma. **Pharmacological Research**. 2021. 163:105294. doi: 10.1016/j.phrs.2020.105294.
- Ferrari B*, Roda E*, Priori EC, **De Luca F**, Facchetti A, Ravera M, Brandalise F, Locatelli CA, Rossi P, Bottone MG. A New Platinum-Based Prodrug Candidate for Chemotherapy and Its Synergistic Effect With Hadrontherapy: Novel Strategy to Treat Glioblastoma. **Frontiers in Neuroscience**. 2021 (*Both co-first author). 22;15:589906. doi: 10.3389/fnins.2021.589906.
- Roda E*, Priori EC*, Ratto D, **De Luca F**, Di Iorio C, Angelone P, Locatelli CA, Desiderio A, Goppa L, Savino E, Bottone MG, Rossi P. Neuroprotective Metabolites of *Hericium erinaceus* Promote Neuro-Healthy Aging. **International Journal of Molecular Sciences**. 2021 (*Both co-first author). 22(12): 6379. doi: 10.3390/ijms22126379.
- Roda E, Ratto D, **De Luca F**, Desiderio A, Ramieri M, Goppa L, Savino E, Bottone MG, Locatelli CA, Rossi P. Searching for a Longevity Food, We Bump into *Hericium erinaceus* Primordium Rich in Ergothioneine: The “Longevity Vitamin” Improves Locomotor Performances during Aging. **Nutrients**. 2022. 14, 1177. doi: 10.3390/nu14061177.
- Roda E*, **De Luca F***, Ratto D, Priori EC, Savino E, Bottone MG, Rossi P. Cognitive Healthy Aging in Mice: Boosting Memory by an Ergothioneine-Rich *Hericium erinaceus* Primordium Extract. *Biology (Basel)*. 2023 (*Both co-first author). 28;12(2):196. doi: 10.3390/biology12020196.
- Gola F, Gaiaschi L, Roda E, **De Luca F**, Ferulli F, Vicini R, Rossi P, Bottone MG. Voghera Sweet Pepper: A Potential Ally against Oxidative Stress and Aging. *International Journal of Molecular Sciences*. 2023. 24(4):3782. <https://doi.org/10.3390/ijms24043782>
- De Luca F***, Roda E*, Ratto D, Desiderio A, Venuti MT, Ramieri M, Bottone MG, Savino E, Rossi P. Fighting secondary triple-negative breast cancer in cerebellum: A powerful aid from a medicinal mushrooms blend. **Biomedicine & Pharmacotherapy**. 2023 (*Both co-first author). 159:114262. doi: 10.1016/j.biopha.2023.114262.
- Roda E*, **De Luca F***, Priori EC, Ratto D, Pinelli S, Corradini E, Mozzoni P, Poli D, Mazzini G, Bottone MG, Gatti AM, Marti M, Locatelli CA, Rossi P, Bottai D. The Designer Drug α PHP Affected Cell Proliferation and Triggered Deathly Mechanisms in Murine Neural Stem/Progenitor Cells. *Biology (Basel)*. 2023 (*Both co-first author). Sep 11;12(9):1225. doi: 10.3390/biology12091225.
- Gaiaschi L, Favaron C, Casali C, Gola F, **De Luca F**, Ravera M, Roda E, Rossi P, Bottone MG. Study on the activation of cell death mechanisms: in search of new therapeutic targets in glioblastoma multiforme. *Apoptosis*. 2023 Aug;28(7-8):1241-1257. doi: 10.1007/s10495-023-01857-x.

Corli G, Roda E, Tirri M, Bilel S, **De Luca F**, Strano-Rossi S, Gaudio RM, De-Giorgio F, Fattore L, Locatelli CA, Marti M. Sex-specific behavioural, metabolic, and immunohistochemical changes after repeated administration of the synthetic cannabinoid AKB48 in mice. *Br J Pharmacol*. 2023 Dec 27. doi: 10.1111/bph.16311.

Priori EC, Ratto D, **De Luca F**, Sandionigi A, Savino E, Giammello F, Romeo M, Brandalise F, Roda E, Rossi P. Hericium erinaceus Extract Exerts Beneficial Effects on Gut-Neuroinflammation-Cognitive Axis in Elderly Mice. *Biology (Basel)*. 2023 Dec 28;13(1):18. doi: 10.3390/biology13010018.

CONGRESS

De Luca F, Priori EC, Ferrari B, De Pascali SA, Fanizzi FP, Bottone MG, Roda E. Evaluation of neurotoxic effects of platinum compounds on developing rat cerebellum: inflammatory and oxidative stress pathways. XV FISV CONGRESS. 18-21 September 2018, Sapienza University of Rome, Italy.

De Luca F, Priori EC, Ferrari B, De Pascali SA, Fanizzi FP, Bottone MG, Roda E. Developmental neurotoxicity of two different platinum compounds, the conventional CisPt and the novel PtacacDMS. Inflammatory and oxidative stress pathways evaluation in rat cerebellum. ABCD congress. 2018, Pavia, Italy.

Ratto D, Corana F, Mannucci B, Priori EC, Cobelli F, Roda E, Ferrari B, Occhinegro A, Di Iorio C, **De Luca F**, Cesaroni V, Girometta C, Bottone MG, Savino E, Kawagishi H, Rossi P. Hericium erinaceus dietary supplementation promotes proliferation and neurogenesis in frailty mice. An immunofluorescence study in hippocampus and cerebellum. GIC, XXXVI CONFERENZA NAZIONALE DI CITOMETRIA. 2019, Paestum, Italy.

Priori EC, Ferrari B, Besio R, **De Luca F**, Roda E, Forlino A, Bottone M. Postnatal development of prolidase deficient mice (dal) cerebellum: oxidative and inflammatory pathways evaluation. CONVEGNO UNIFICATO GEI-SIBSC E SII. 24-27 Giugno 2019, Ancona, Italy.

Ferrari B, Ratto D, Siciliani S, Priori EC, **De Luca F**, Veneroni P, Roda E, Rossi P, Osella D, Bottone MG. A new platinum-based prodrug candidate: its anticancer effects and in vitro approaches to understand novel target to treat Glioblastoma. ABCD, THE BIENNIAL CONGRESS OF THE ITALIAN ASSOCIATION OF CELL BIOLOGY AND DIFFERENTIATION. 19-21 September 2019, Bologna, Italy.

Priori EC, Ferrari B, Besio R, **De Luca F**, Cobelli F, Roda E, Forlino A, Bottone MG. Oxidative stress and inflammatory pathways evaluation in prolidase deficient mice: a cerebellar postnatal development study. ABCD, THE BIENNIAL CONGRESS OF THE ITALIAN ASSOCIATION OF CELL BIOLOGY AND DIFFERENTIATION. 19-21 September 2019, Bologna, Italy.

Priori EC, **De Luca F**, Inguscio CR, Ferrari B, Ratto D, Di Iorio C, Desiderio A, Angelone P, Savino E, Bottone MG, Rossi P, Roda E. Oxidative stress and neuroinflammation effects in hippocampal development, ageing and disease. GIC web conference 2021.

Inguscio CR, Ferrari B, Priori EC, **De Luca F**, Ratto D, Di Iorio C, Veneroni P, Desiderio A, Angelone P, Mazzini G, Savino E, Roda E, Rossi P, Bottone MG. A dietary Ganoderma lucidum-based supplementation as a chemotherapeutic adjuvant therapy in glioblastoma. GIC web conference 2021.

De Luca F, Di Iorio C, Ratto D, Priori EC, Favaron C, Inguscio CR, Ferrari B, Savino E, Roda E, Bottone MG, Rossi P. New molecular targets for overcoming drug resistance in Triple Negative Breast Cancer. GIC web conference 2021 (**speaker invitation**).

De Luca F, Locatelli C, Marti M, Priori EC, Bottone MG, Rossi P, Roda E. Effects of the new synthetic cannabinoid AKB-48 (APINACA) on endocannabinoid and serotonergic pathways in the cerebellum. Morphological and immunohistochemical study in mouse model. XX SITOX congress, 25-27 October 2021, Bologna, Italy.

Roda E, **De Luca F**, Marti M, Caneva V, Marrubini G, Papa P, Locatelli CA. Analytical methods in clinical toxicology for the diagnosis of intoxication by synthetic cathinones: comparison of screening tests with Biochip Array technology and confirmatory analysis by LC-MS/MS. XX SITOX congress, 25-27 October 2021, Bologna, Italy.

Roda E, **De Luca F**, Priori EC, Ratto D, Savino E, Bottone MG, Locatelli CA, Rossi P. Mycotherapy blend as adjuvant therapy in TNBC mouse model: study of cell death pathway in cerebellum. XX SITOX congress, 25-27 October 2021, Bologna, Italy.

Roda E, **De Luca F**, Bottai D, Priori EC, Bottone MG, Rossi P, Marti M, Locatelli CA. In vitro study of the cytotoxic potential of the synthetic α -PHP cathinone: effects on murine neural stem cells. XX SITOX congress, 25-27 October 2021, Bologna, Italy.

De Luca F, Di Giancamillo A, Aidos L, Pallaoro M, Bosi P, Herrera V, Modena SC. New old techniques: combined approaches for succinate dehydrogenase assay of skeletal muscle in rabbit, pig and cow. 75° SISVET congress, 15-18 June 2022, Lodi, Italy.

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