EDUCATION

- University of Camerino - School of Advanced Studies -
  Ph.D in Life and Health Sciences   06/11/2019-20/01/2023
  - Molecular biology and cellular biotechnology-1

  Thesis "Gut microbiota modulation in Alzheimer's disease"
  Final vote Excellent

- University of Camerino - School of Biosciences and Veterinary Medicine -
  MSc in Biological Sciences   13/10/2017-17/10/2019
  - Molecular diagnostics and biotechnology-1(LM-6)

  Thesis "*In vitro* and *in vivo* anticancer effect of *Lithospermum erythrorhizon* extract on breast cancer"
  Final vote 110/110 con lode

- Jilin Agricultural University (China) - School of life Science
  BSc in Biotechnology   01/09/2013-30/06/2017
  - Biotechnology

  Thesis "Biosynthesis and purification of fructosan"

RESEARCH EXPERIENCE

Ph.D
- The research focused on specific mechanisms through which SLAB51 probiotic formulation chronic supplementation exerted neuroprotective and anti-inflammatory effects in a murine model of Alzheimer's disease (AD) (3xTg-AD mice), focusing on both cerebral hypoxia and lipid metabolism;

- Additional experiments contributed to unravel the neuroprotective properties of gut microbial metabolites in a cellular model of Alzheimer's disease (AD) (SH-SY5Y neuroblastoma cells) and in immortalized hippocampal AD astrocytes, focusing on proteolysis.

Master's degree (MSc)
- The research primarily validated the anticancer activity of *Lithospermum erythrorhizon* from Traditional Chinese Medicine (TCM) against triple-negative and HER2-positive breast cancer subtypes both *in vitro* and *in vivo*.

Bachelor degree (BSc)
- The research focused on the synthesis of fructosan by using levansucrase, obtained

by precipitation of ammonium sulfate.

ADDITIONAL ACTIVITIES

- 2022
  Reviewer for the Journal of neuroinflammation

- Academic year 2021/2022
  Lecturer of Clinical and Molecular diagnosis in the Biological Sciences (Master's degree course)

- Academic year 2020/2021
  Lecturer of Clinical and Molecular diagnosis in the Biological Sciences (Master's degree course)

- Academic year 2018/2019
  University of Camerino - Supportive Tutor of international Office of UNICAM

PERSONAL SKILLS AND COMPETENCES

- First language: Chinese   Other language: English, Italian (A1)

- Organisational/Managerial skills: Aptitude for teamwork, ability to work independently, flexibility, listening skills, time management skills, planning aptitude.

- IT skills: - Knowledge of operating systems: Windows.
            - Knowledge of word processing and data processing/presentation software: MS-Office, Photoshop, Chemidoc Imaging software, EndNote, Mendeley, GraphPad Prism, Fiji-Image J.

- **Professional skills**:-   Specific skills in the execution of HPLC chromatographic techniques, UV-VIS spectrophotometric techniques, spectrofluorimetric techniques, electrophoresis;
  - Techniques based on biomolecular interactions (PCR, Western blotting, ELISA, IHC);
  - Cell culture, techniques applied to the isolation, purification and characterization of biological macromolecules from animal tissues and cell lysates.
  - Light and fluorescence microscopy for the evaluation of autophagy and apoptosis markers, as well as for in vitro cell migration tests.

CONFERENCES

AS SPEAKER:
- 25/11/2022: "**1ˢᵗ PhD workshop Life and health sciences**", at the School of Advanced Studies, Camerino (Italy)
  - Talk title: "Immortalized Alzheimer's disease astrocytes: characterization of their proteolytic pathways".

- 12-14/09/2022: "**11th international congress on Probiotics, Prebiotics & New Foods**", Roma (Italy)
  - Talk title: "Improved lipid metabolism in a mouse model of Alzheimer's disease upon strategic modulation of gut microbiota".

- 13/07/2021: "**5° national congress on "Alimenti e Nutrizione" e "Salute Umana e Animale**", Camerino (Italy)
  - Talk title: "Strategic change of gut microbiota composition ameliorates lipid metabolism in Alzheimer's disease".

- 30/06/2021: "**Bilateral doctoral meeting UNICAM - Jilin Agricultural University**", at the School of Advanced Studies, Camerino (Italy)
  - Talk title: "Improved lipid metabolism in a mouse model of Alzheimer's disease upon strategic modulation of gut microbiota".

ABSTRACT PRESENTED:
- 2021: "**5° national congress on "Alimenti e nutraceutici: salute e prevenzione attraverso il cibo**", Camerino (Italy), with "Strategic change of gut microbiota composition ameliorates lipid metabolism in Alzheimer's disease" C Gong, L Bonfili, M Cuccioloni, V Cecarini, M Angeletti, AM Eleuteri ISBN: 978-88-6768-049-8.

- 2021: "**XIX National congress of SINS (Società Italiana di Neuroscienze)**", Brescia (Italy), with "Remodeling of glial cells in brain diseases: all roads lead to neuroinflammation?" – "Microbiota modulation counteracts neuroinflammation in 3xTg-AD mice" L Bonfili, V Cecarini, C Gong, AM Eleuteri.

- 2021: "**5° national congress on "Alimenti e nutraceutici: salute e prevenzione attraverso il cibo**", Camerino (Italy), with "Gut microbiota modulation counteracts neuroinflammation and reduces the deposition of amyloid and tau in Alzheimer's disease" L Bonfili, V Cecarini, C Gong, AM Eleuteri ISBN: 978-88-6768-049-8.

- 2021: "**5° national congress on "Alimenti e nutraceutici: salute e prevenzione attraverso il cibo**", Camerino (Italy), with "Polyphenol microbial metabolites modulate proteolysis in neuronal cells reducing amyloid beta (1-42) levels" V

Cecarini, M Cuccioloni, Y Zheng, L Bonfili, C Gong, M Angeletti, P Mena, D Del Rio, AM Eleuteri ISBN: 978-88-6768-049-8.

LIST OF PUBLICATIONS

1. Romani D, Marchetti F, Di Nicola C, Cuccioloni M, Gong C, Eleuteri AM, Galindo A, Fadaei Tirani F, Nabissi M, Pettinari R. Multitarget-directed gallium (III) tris(acyl-pyrazolonate) complexes induce ferroptosis in cancer cells via dysregulation of cell redox homeostasis and inhibition of the mevalonate pathway. J. Med. Chem. 2023 Feb 21. doi: 10.1021/acs.jmedchem.2c01374. (**Molecular Medicine, Q1, IF=8.039**)

2. Gong C, Bonfili L, Zheng Y, Cecarini V, Cuccioloni M, Angeletti M, Dematteis G, Tapella L, Genazzani AA, Lim D, Eleuteri AM. Immortalized Alzheimer's Disease Astrocytes: Characterization of Their Proteolytic Systems. Mol Neurobiol. 2023 Feb 2. doi: 10.1007/s12035-023-03231-z. Epub ahead of print. PMID: 36729287. (**Neurology, Q1, IF=5.682**)

3. Cecarini V, Selmi S, Cuccioloni M, Gong C, Bonfili L, Zheng Y, Cortese M, Angeletti M, Kilani S, Eleuteri AM. Targeting Proteolysis with Cyanogenic Glycoside Amygdalin Induces Apoptosis in Breast Cancer Cells. Molecules. 2022 Nov 5;27(21):7591. doi: 10.3390/molecules27217591. PMID: 36364419; PMCID: PMC9657530. (**Pharmaceutical Science, Q1, IF=4.927**)

4. D'Argenio V, Veneruso I, Gong C, Cecarini V, Bonfili L, Eleuteri AM. Gut Microbiome and Mycobiome Alterations in an In Vivo Model of Alzheimer's Disease. Genes (Basel). 2022 Aug 31;13(9):1564. doi: 10.3390/genes13091564.PMID: 36140732; PMCID: PMC9498768. (**Genetics, Q2, IF=4.474**)

5. Bonfili L, Cuccioloni M, Gong C, Cecarini V, Spina M, Zheng Y, Angeletti M, Eleuteri AM. Reply - Letter to the editor "Comment on "Gut microbiota modulation in Alzheimer's disease: Focus on lipid metabolism Clinical nutrition 2022. Clin Nutr. 2022 Oct;41(10):2416-2417. doi: 10.1016/j.clnu.2022.06.029. Epub 2022 Jun 30. PMID: 35811234. (**Nutrition and Dietetics, Q1, IF=6.77**)

6. Bonfili L, Cuccioloni M, Gong C, Cecarini V, Spina M, Zheng Y, Angeletti M, Eleuteri AM. Gut microbiota modulation in Alzheimer's disease: Focus on lipid metabolism. Clin Nutr. 2022 Mar;41(3):698-708. doi: 10.1016/j.clnu.2022.01.025. Epub 2022 Feb 2. PMID: 35158177. (**Nutrition and Dietetics, Q1, IF=6.77**)

7. Bonfili L, Gong C, Lombardi F, Cifone MG, Eleuteri AM. Strategic

Modification of Gut Microbiota through Oral Bacteriotherapy Influences Hypoxia Inducible Factor-1α: Therapeutic Implication in Alzheimer's Disease. Int J Mol Sci. 2021 Dec 29;23(1):357. doi: 10.3390/ijms23010357. PMID: 35008786; PMCID: PMC8745493. (**Medicine**, **Q1, IF=5.934**)

8. Cecarini V, Cuccioloni M, Zheng Y, Bonfili L, Gong C, Angeletti M, Mena P, Del Rio D, Eleuteri AM. Flavan-3-ol Microbial Metabolites Modulate Proteolysis in Neuronal Cells Reducing Amyloid-beta (1-42) Levels. Mol Nutr Food Res. 2021 Sep;65(18):e2100380. doi: 10.1002/mnfr.202100380. Epub 2021 Aug 7. PMID: 34318994; PMCID: PMC9285603. (**Food Sciences, Q1, IF=4.653**)

9. Bonfili L, Cecarini V, Gogoi O, Gong C, Cuccioloni M, Angeletti M, Rossi G, Eleuteri AM. Microbiota modulation as preventative and therapeutic approach in Alzheimer's disease. FEBS J. 2021 May;288(9):2836-2855. doi: 10.1111/febs.15571. Epub 2020 Oct 8. PMID: 32969566. (**Biochemistry**, **Q1, IF=5.542**)