Nunzia Esercizio, PhD.
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- EDUCATION

2023 PhD in Biology
Department of Biology, University of Naples Federico II (Naples, Italy)
PhD Supervisor: Prof. Angelo Fontana
2017 Master's Degree in Biology 110/110, cum laude
Department of Biology, University of Naples Federico II (Naples, Italy)

- CURRENT POSITION

Dec 2024- Today: Researcher, Institute of Biomolecular Chemistry (ICB)- CNR / Pozzuoli, Italy

- PREVIOUS POSITIONS

Nov 2022- Dec 2024: Permanent Mathematics and Science Secondary School Teacher, Istituto Comprensivo "Don Lorenzo Milani" (Torre del Greco, Naples, Italy)

Nov 2019 – Oct 2022: Research Fellow, Institute of Biomolecular Chemistry (ICB-CNR) in collaboration with University of Naples, Department of Biology, in the field of "Characterization of the Capnophilic Lactic Fermentation pathway and molecular approaches in the hyperthermophilic bacterium *Thermotoga neapolitana*"

Apr 2019- Sept 2019: Researcher (Lv. B2) at BioSEArch Srl. From April 2019 to July 2019 also Visitor Scholar at Bowling Green State University (OH, USA) Tutor: Prof. Zhaohui Xu - Associate Professor, Department of Biological Sciences, 538A Life Science Building, 419.372.4645 (Bowling Green, OH- USA)

Oct 2018- Mar 2019: Researcher's scholarship (Funded by European Project BIORECO2VER), Institute of Biomolecular Chemistry (ICB-CNR) in the field of "Technological optimization of operational parameters in *Thermotoga neapolitana* cultures to improve CO_2 absorption in lactic acid; molecular identification of key enzymes involved in CLF in *Thermotoga neapolitana*"

Feb 2018- Aug 2018: Post-graduate training internship, Institute of Biomolecular Chemistry (ICB-CNR) in collaboration with University of Naples, Department of Biology, in the field of "Biological routes for CO_2 conversion into chemical building blocks- Cultivation of *Thermotoga neapolitana* in serum bottles and bioreactors and characterization of growth parameters

- REPRESENTATIVE PUBLICATIONS:

1_Nuzzo, G.; Landi, S.; **Esercizio, N.**; Manzo, E.; Fontana, A.; d'Ippolito, G. Capnophilic Lactic Fermentation from *Thermotoga neapolitana*: A Resourceful Pathway to Obtain Almost Enantiopure L-lactic Acid. Fermentation 2019, 5, 34.

2_d'Ippolito G, Landi S, **Esercizio N.**, Lanzilli M, Vastano M, Dipasquale L, Pradhan N and Fontana A. CO_2-Induced Transcriptional Reorganization: Molecular Basis of Capnophillic Lactic Fermentation in *Thermotoga neapolitana*. Front. Microbiol. 2020. 11:171

3_Squadrito G, Cristiani P, d'Ippolito G, Tucci M, **Esercizio N.**, Sardo A, Vastano M, Lanzilli M, Fontana A. Hyperthermiphile biofilms of *Thermotoga neapolitana* on different materials and electrostimulated: SEM micrographs and chemical data of the glucose fermentation in electrochemical reactors. Data Brief. 2020 Oct 11; 33:106403.

4_**Esercizio, N.**; Lanzilli, M.; Vastano, M.; Landi, S.; Xu, Z.; Gallo, C.; Nuzzo, G.; Manzo, E.; Fontana, A.; d'Ippolito, G. Fermentation of Biodegradable Organic Waste by the Family *Thermotogaceae*. Resources. 2021, 10, 34.

5_Lanzilli, M.; **Esercizio, N.**; Vastano, M.; Xu, Z.; Nuzzo, G.; Gallo, C.; Manzo, E.; Fontana, A.; d'Ippolito, G. Effect of Cultivation Parameters on Fermentation and Hydrogen Production in the Phylum *Thermotogae*. Int. J. Mol. Sci. 2021, 22, 341.

6_**Esercizio, N.**; Lanzilli, M.; Vastano, M.; Xu, Z.; Landi, S.; Caso, L.; Gallo, C.; Nuzzo, G.; Manzo, E.; Fontana, A.; et al. Improvement of CO_2 and Acetate Coupling into Lactic Acid by Genetic Manipulation of the hyperthermophilic Bacterium *Thermotoga neapolitana*. Microorganisms 2021, 9, 1688.

7_d'Ippolito, G.; Squadrito, G.; Tucci, M.; **Esercizio, N.**; Sardo, A.; Vastano, M.; Lanzilli, M.; Fontana, A.; Cristiani, P. Electrostimulation of hyperthermophile *Thermotoga neapolitana* cultures, Bioresource Technology, 2021, Volume 319, 2021,124078, ISSN 0960-8524.

8_**Esercizio, N.**; Lanzilli, M.; Landi, S.; Caso, L.; Xu, Z.; Nuzzo, G.; Gallo, C.; Manzo, E.; Esposito, S.; Fontana, A.; et al. Occurrence of Capnophilic Lactic Fermentation in the Hyperthermophilic Anaerobic Bacterium *Thermotoga sp. Strain RQ*7. Int. J. Mol. Sci. 2022, 23, 1204