

Therapeutic Strategies in Cancer and Aging-Related Diseases

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Rapporto strutturati/non strutturati: 1 PA; 1 RU; 1 Post-doc



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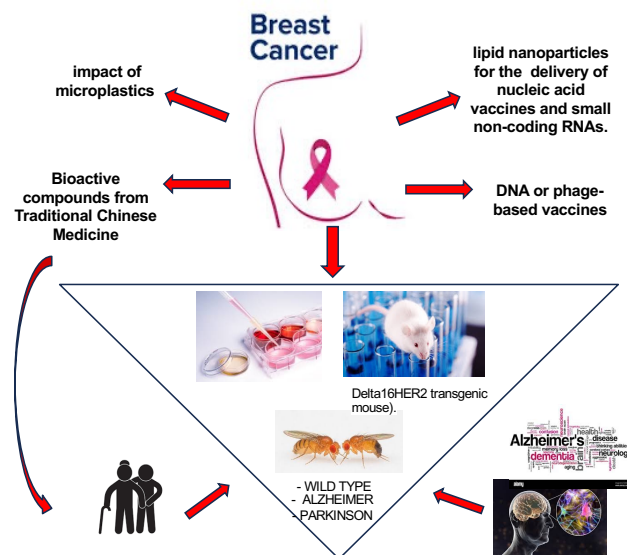


Characterizing studies

- Development of immunotherapies (DNA vaccines and phage-based vaccines) and therapeutics/adjuvants (natural compounds from Traditional Chinese Medicine; RNA-based drugs) against breast cancer and their validation in preclinical models mimicking patients' clinical condition (Delta16HER2 transgenic mouse).
- Development of lipid nanoparticles (LNPs) for the delivery of nucleic acid vaccines and small non-coding RNAs.
- Evaluation of the impact of microplastics exposure on tumorigenesis and response to cancer therapies.
- Inflammaging, immunosenescence and neurodegeneration (*Drosophila melanogaster*).
- Functional foods, bioactives peptides in healthy aging or neurodegeneration (*Drosophila melanogaster*).
- Microbiota-gut-brain axis in aging and neurodegeneration (*Drosophila melanogaster*).

National and International Impact:

The research conducted by the Applied Biology group in the field of breast cancer (BC) has a significant impact. Indeed, BC is the second leading cause of cancer death in women, thus the obtained results might permit to improve patient prognosis. Moreover, understanding the impact of microplastics on human health, and in particular on BC, might increase the awareness of the detrimental effects of plastic pollution. Overall, the research conducted by groups working in the field of cancers, aging and associated diseases (neurodegenerations) has allowed for the involvement of Unicom "researchers" in the financed competitive national research programs.



National and International collaborations:

Michigan State University, USA; University of Cincinnati, USA; University of Greenwich, UK; Dalhousie University, Canada; CRO Aviano; La Sapienza University; INRCA Ancona; University of Torino; University of Bologna; University of Pisa; University Chieti- Pescara; University of Perugia.

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Roles in scientific societies/Networks/Research centres:

Member of Associazione Italiana di Biologia e Genetica (AIBG); Member of Italian Society of Biochemistry (SIB); Member of Italian Proteomic Association (ItPA)