

Dr. MARIA COLOMBINO, PhD

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Personal Information

Date of Birth: March 4, 1973.
Place of Birth: Sassari (SS), Italy.
Citizenship: Italian.

Education

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| 2018 | National Scientific Qualification functions for Associate Professor in the sector for the field of competition 05 / E3 - Clinical Biochemistry and Clinical Molecular Biology |
| 2007 | Ph.D. in Biochemistry, Biology and Molecular Biotechnology, University of Sassari, Italy. Dissertation title: “Mutational Analysis of Fanconi genes in sporadic colorectal cancer”. Tutor: Dr. Giuseppe Palmieri |
| 2004-2007 | Doctoral Fellowship, laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Bio-molecular Chemistry (Director Dr. Mario Marchetti – CNR), Sassari, Italy
• Role of Fanconi genes in sporadic colorectal cancer. |
| 2001 | Degree in Molecular Biology, University of Sassari, Italy.
Dissertation title: “Study of Mismatch Repair Gene, MLH1, in familial and sporadic colorectal cancer”. Supervisor: Prof. Bruno Masala. Tutor: Dr. Mario Pirastu. |
| 1998-2001 | Internship, Laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Molecular Genetics (Director Dr. Mario Pirastu- CNR), Alghero, Italy.
• Study of microsatellite instability in patients with rectal carcinoma.
• Study of microsatellite instability and mutational analysis among patients with colorectal carcinoma |

Post-doctoral training

- 2005-2007 Post-Doctoral Fellowship, Laboratory of Genetics, National Institute of Aging (NIA), National Institute of Health (NIH), Baltimore, MD, USA. Supervisor: Prof. David Schlessinger.
- Isolation and culture of ovarian surface epithelial cells.
 - Expression of candidate genes in gonadal epithelial cells
 - Expression of candidate cancer genes in human ovarian surface epithelial cells (HOSE)
 - Preparation of construct for transgenic mice (using the Cre-LoxP recombination system) to create a possible mouse model of Ovarian cancer.

Languages

Italian.
English.
Spanish.

Research Experience

- 2018 to date Permanent Researcher at the National Council Research (C.N.R.), Institute of Biomolecular Chemistry, Italy
- 2014-2018 Researcher, Laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Bio-molecular Chemistry, Sassari, Italy
Genetic and molecular analysis in familial or sporadic cancer patients (colorectal carcinomas and malignant melanoma) at germline and/or somatic level.
Molecular and biological studies on mechanisms and genes involved in development and progression of colorectal and malignant melanoma.
- 2011-2014 Researcher, Laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Bio-molecular Chemistry, Sassari, Italy
Assessment of new molecular markers for diagnosis (molecular staging) and prognosis (tumor progression and response to therapy) in patients with malignant melanoma
- 2009-2011 Researcher, Department of Biomedical Sciences- Histology, Sassari
PR1-MAB-A208-236 Lentivirus transfer to tissue engineering
- 2008-2009 Researcher, Laboratory of Molecular Biology, Agris Sardegna, Bonassai, Sassari. Supervisor: Prof. Antonello Carta
- Mutational analysis of SCD gene
 - Isolation and sequencing of FASN gene
 - Study of genetic variation in different sheep breeds using microsatellite analysis.

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| 2007-2008 | Post-doctoral researcher, Laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Bio-molecular Chemistry, Sassari, Italy
• Protein expression study of melanoma cell lines by western blotting. |
| 2004-2005 | PhD student, Laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Bio-molecular Chemistry, Sassari, Italy
• Mutational analysis of Fanconi gene in patients with sporadic colorectal cancer by MLPA (Multiplex Ligation-dependent Probe Amplification) and capillary electrophoresis |
| 2003-2004 | Junior researcher, Laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Bio-molecular Chemistry, Sassari, Italy
• Mutational analysis of BRAF gene to understand its contribution to Malignant Melanoma susceptibility.
• Study of MLH1 and MSH2 in familial colorectal cancer |
| 2002-2003 | Junior researcher, Laboratory of Dr. Giuseppe Palmieri, Tumor Genetic group, Institute of Population Genetics, CNR, Alghero, Italy. |

Institutional didactic activity at the University of Sassari

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| A.A. 2010-2011 | Adjunct Professor in Genetics for the Integrated course in Biology and Genetics |
| A.A. 2010-2011
A.A. 2009-2010 | Adjunct Professor in Applied Biology for the Integrated course in Biochemistry, Biology, Genetics and Microbiology. |
| A.A. 2009-2010
A.A. 2008-2009 | Teaching Assignment for Supplementary Teaching Activity for Histology and Applied Biology |

Relational Skills and Competences

Attitudes to group research work, also as a coordinator.
Good communication skills gained through teaching and congress experiences.

Organization Skills

Didactic planning in the field of teacher training Exhibition seminars of research activity.
Analysis and development of degree thesis.
Analysis and development of research projects.

Technical Skills and Competences

Skills in molecular biology techniques: DNA/RNA extraction, nucleic acid manipulation (mutagenesis, cloning in expression vectors), gel electrophoresis, Western Blot, immunoprecipitation, PCR, RT-PCR, DHPLC, Direct Sequencing, MLPA, Real Time,

Pyrosequencing, Next-Generation Sequencing Methods

Skills in cell biology techniques: preparation and maintenance of primary cell cultures of different origins, maintenance in culture, cell line transfection techniques; immunohistochemical and immunofluorescence techniques, image analysis using software.
High competence in molecular oncology diagnostics.

Reviewer / Referee for international scientific journals JCR: European Journal of Cancer, European Journal of Surgical Oncology, Molecular Oncology, Journal of Translational Medicine, Mutation Research-Genome instability and disease, Journal of Oncology, The Journal of Molecular Diagnostics

Membership in National and International Scientific Societies: Italian Melanoma Intergroup (IMI): from 2004 to present

Member of the Diagnostic Therapeutic and Assistance Pathway (PDTA) for the management of the patient with melanoma or suspected melanoma of the AOU of Sassari: from 2017 to today

Research Products Author of

49 Publications in indexed journals (Pubmed, Scopus, WOS)

4 Other Publications

2 book chapters

65 Abstracts published in reviewed journals

13 Invitations as Speaker to Congresses

Autorizzo al trattamento dei dati personali ai sensi del decreto legislativo 196/03