CURRICULUM VITAE

Paola Campomenosi

Current position
Assistant Professor of Genetics (SSD BIO/18) since March 2002

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Molecular Genetics Laboratory
Department of Biotechnology and Life Sciences (DBSV)
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Scientific identifiers
ORCID 0000-0002-8853-1134
WoS and Publons ID: C-9729-2011
Scopus ID: 35611577000

Bibliometric indexes
H-index= 19 according to Scopus
1033 total citations according to Scopus, as of 2022, December 6th
52 peer-reviewed publications on scientific journals indexed in Scopus

Professional and research experience

January 31st, 2022: National Scientific Habilitation as Associate Professor of Genetics (S.C. 05/I1, SSD BIO/18)

Since March 2019: Member of the Committee of the PhD School in "Life Sciences and Biotechnology, University of Insubria

November 2009-October 2012: Member of the Committee of the PhD School in "Cellular and Molecular Biology", University of Insubria

Since June 2009: Principal Investigator, Laboratory of Molecular Genetics, University of Insubria, Varese

Since March 1st, 2002: Assistant Professor of Genetics at University of Insubria (S.C. 05/I1, SSD BIO/18).
Maternity leave: September 17th 2009 – February 17th 2010

2001: Research fellow at University of Insubria. Topic: human secreted T2 ribonuclease (RNASET2), tumor/stroma interaction.

1997-2000: Research fellow at the National Institute for Cancer Research in Genoa.

1996-1997: Post-doc position at University of Dundee, dept. of Pathology.

1993-1996: Research fellow at the National Institute for Cancer Research in Genoa.

February 1991-April 1991: International Union against Cancer (UICC) fellow (ICRETT Short term) MRC Toxicology Unit, Carshalton, UK.

January 1990-December 1992: AIRC (Italian Association for Cancer Research) fellow, National Institute for Cancer Research, Genova, Italy.

Education/qualifications

January 31st, 2022: National Scientific Habilitation as Associate Professor of Genetics (Abilitazione Scientifica Nazionale per l'accesso al ruolo di Professore di Seconda Fascia in Genetica, SSD BIO/18, S.C. 05/I1)

1997: Specialization in Medical Genetics, University of Genova.

1991: Specialization in Hygiene (Laboratory of public health), University of Genova.

1990: Exam and enrolment in the National Order of Biologists

1989: Degree with honors (110/110 cum laude) in Biological Sciences, University of Genova

Awards

2000: winner of a Gaetano Fichera Fellow Award, Johns Hopkins Oncology Center, Baltimore, USA

1990-1992: winner of an AIRC (Italian Association for Cancer Research) fellowship, National Institute for Cancer Research, Genova

1991: winner of a short term UICC (International Union against Cancer) fellowship (ICRETT), MRC Toxicology Unit, Carshalton, UK

Research support

Research grant, University of Insubria, call 2022. Project title: "Towards the development of a microRNA-based screening test for non-small cell lung cancer: application of a novel platform (ODG) for direct quantification of miR-223 from serum"

FAR (Fondo di Ateneo per la Ricerca)

FINANZIAMENTO DELLE ATTIVITÀ BASE DI RICERCA 2017 - Ricercatori

FOCOVA (Fondazione comunitaria del Varesotto), call 2015: Scientific research of special social interest. “D-Aminoacids and human pathologies: a multidisciplinary approach”

FOCOVA (Fondazione comunitaria del Varesotto), Call 2014: Scientific research of special social interest. “Early diagnosis of lung cancer by measurement of microRNA biomarkers in blood”

CARIPLO Call 2011 (CUPJ31J11004830003): "Carbon nanotubes, friends or foes? Implications in human health".

PRIN Call 2003: “Caratterizzazione funzionale mediante tecnologie transgeniche e di ablazione genica di un gene (DRAP/BACE2) coinvolto nella patologie neurodegenerative e neoplastiche”.

Invitations for seminars at academic conferences and institutions

Workshop “Small but mighty: microRNAs and microtechnologies for the diagnosis of lung cancer”. Cibio, University of Trento, 13/11/2019: "The challenges of circulating miRNA quantification"

BIORAD event: “Droplet Digital PCR Scientific conference 2017” University of Padova, 29/09/2017: "Serum microRNAs as Biomarkers for Early Diagnosis of Lung Cancer: Reality or Utopia?"

“The Protein Factory meets Annalisa Pastore. University of Insubria, Varese, 19/12/2016: "The multifaceted roles of proline dehydrogenase in human diseases"

Memberships

-Ambassador for the European Association for Cancer Research (EACR)
-Società Italiana di Cancerologia (SIC)
-Associazione Genetica Italiana (AGI)
-Società Italiana di Genetica Umana (SIGU)

Present teaching activities

- GENETICS, BSc in Biotechnology, since A.Y. 2015-16:
- MOLECULAR DIAGNOSTICS, MSc course in Biotechnology for the Bio-based and Health Industry (A.Y. 2022-2023). Previously named “MOLECULAR DIAGNOSTIC TECHNIQUES” in the MSc course of Molecular and industrial biotechnology (since A.Y. 2012-13
- Laboratory within the course of “Recombinant DNA technologies”, BSc in Biotechnology (since A.Y. 2019-20)

Other teaching/didactic activities
-Member of the "Commissione Paritetica Docenti Studenti" (CPDS) of the Department of Biotechnology and Life Sciences
-Student tutor for the BSc course in Biotechnology
-Supervisor/tutor of seven PhD students of the "Cellular and Molecular Biology" and "Life Sciences and Biotechnology" PhD courses
-Supervisor of more than 80 BSc and MSc students for experimental theses

Public engagement & science communication
-Laboratory for high schools within the "PROGETTO NAZIONALE LAUREE SCIENTIFICHE (PNLS)", University of Insubria: "Matters of taste: the genetics of bitter taste receptors"
-"European Researchers night". Laboratory activities in the town centre of Varese: "DNA extraction with kitchen products"
-Primary school activities: "what is DNA?", theory with a DNA model and DNA extraction with kitchen products.

Other activities
-Review editor for the Frontiers journals "Frontiers in Genetics – RNA" and "Frontiers in Oncology - Molecular and Cellular Oncology"
-Reviewer for several indexed international journals (see Publons profile)

Research interests

Since the beginning of my career, I have been interested in studying the process of tumorigenesis by means of molecular and cellular biology techniques. In particular, I contributed to the characterization of genes involved in the process of tumorigenesis, such as *TP53* and *GADD45*. I was involved in characterizing mutations of the tumor suppressor gene *TP53*, frequently mutated during human carcinogenesis in several types of tumors: esophageal cancer and its preneoplastic lesions, such as Barrett's esophagus; glioma; colorectal carcinoma. I applied a yeast based p53 transactivation assay to study the ability of specific p53 mutants to transactivate different targets and their ability to interact with other members of the p53 family, specifically p63 and p73. This powerful method also allowed me to study the mutational and lethal capacity of novel chemotherapeutic drugs. Since my arrival at the University of Insubria, I started the biochemical and functional characterization of a new candidate tumor suppressor gene named *RNASET2*, which maps on a chromosomal region frequently deleted in many types of human cancers. The gene encodes for a ribonuclease and I demonstrated that RNASET2 is a secreted protein and an active ribonuclease, expressing the protein in the baculovirus and Pichia pastoris eukaryotic systems for heterologous protein expression. This allowed me to become familiar with some of the most used systems for heterologous protein expression.

There are currently two main project ongoing in my Molecular Genetics laboratory: the first aims to identify serum microRNAs to be used for screening of early-stage lung cancer; the second project aims to characterize transcriptional regulation of the *PRODH* gene, encoding proline dehydrogenase, a mitochondrial flavoenzyme involved in induction of apoptosis

and autophagy. I have also collaborated at several projects aimed at studying the role of candidate genes in human diseases, such as Amiotrophic Lateral Sclerosis, Chronic rhinosinusitis, chronic low back pain, autism spectrum disorders.