

CURRICULUM VITAE Dr. CLAUDIA GHIGNA



Employment/Education

2021-present Senior Researcher, Institute of Molecular Genetics Luigi Luca Cavalli-Sforza - National Research Council (IGM-CNR), Pavia
2004-2005 Visiting Scientist, Howard Hughes Medical Institute, University of Massachusetts, Worcester, MA, USA
2001-2020 Researcher, Institute of Molecular Genetic - Italian National Research Council (IGM-CNR), Pavia
2000 Advanced School of Integrated Studies (SAFI), Institute of Superior Studies, University of Pavia
2000 PhD Genetics and Molecular Biology, University of Pavia
1997 Qualified Professional Biologist, University of Pavia
1995 Degree in Biological Sciences cum laude, University of Pavia

Awards

2001 CNR Fellowship
1997 Buzzati-Traverso Fellowship
1996 Buzzati-Traverso Fellowship

Leadership in projects (PI)

- 2019-2023 Italian Association for Cancer Research (AIRC) project: 21966
- 2016-2018 Italian Association for Cancer Research (AIRC) project: 17395
- 2014-2015 Fondazione Banca del Monte di Lombardia
- 2011-2014 Worldwide Cancer Research (ex AICR-UK) project: 11-0622
- 2012-2015 Italian Association for Cancer Research (AIRC) project: 11913
- 2005 Short Mobility Grant CNR
- 2004 Short Mobility Grant CNR

Grant as Collaborator/Participant

2020-2022 POR-FESR Regione Lombardia. Project INTERSLA
2015-2020 ERC project
2012-2018 Progetto Invecchiamento CNR
2012-2016 MIUR - CNR Epigenomics Flagship Project Epigen
2008-2011 Cariplo Foundation
2008-2010 AIRC
2004-2007 AIRC
2001-2003 AIRC
2006-2010 FP6 European Commission. Network of Excellence (NoE) –
“EURASNET – European Alternative Splicing Network”
2003-2005 FIRB (Fondo per gli Investimenti della Ricerca di Base) - MIUR

2003-2005 MIUR-CNR genomica funzionale

Invited speaker

- Interplay between RNA binding proteins and non coding RNA's. Fondazione Mondino di Pavia 27-28th June 2019 (Pavia, Italy)
- Meeting SIICA (Italian Society of Immunology, Clinical Immunology and Allergology) 25-27 May 2015. Certosa di Pontignano (Siena, Italy)
- The regulation of the metabolism of nucleic acids as a source of new opportunities for therapeutic intervention, PhD in Genetic and Biomolecular Sciences, University of Pavia (Italy), 12-15 April 2011
- Pre-mRNA maturation from molecular biology to pathology" PhD in Genetic and Biomolecular Sciences, University of Pavia (Italy), 18-25 March 2010;
- Meeting EURASNET ("European Alternative Splicing Network of Excellence"), 1-4 March 2010 Lisbon, Portugal
- International Meeting FISV (Italian Federation of Life Sciences), 23-25 September 2009, Riva del Garda, Italy
- Meeting EURASNET ("European Alternative Splicing Network of Excellence") "Alternative Splicing", 21-23 May 2008, Krakow, Poland;
- "Alternative Splicing and Disease Workshop", 18 – 23 February 2008, University of Montpellier II, France
- "Alternate Transcript Diversity – Biology and Therapeutics" EMBL, 21-23 March, 2006, Heidelberg, Germania;
- 8th Annual Meeting of the RNA Society, 1-6 July 2003, Vienna - Austria;
- "RNA day", 28 January, 2003, La Sapienza University, Rome.

Ad hoc reviewer

Science, Nature Communications, Molecular Cancer, Nucleic Acids Research, Trends in Molecular Medicine, Cancers, Scientific Reports, Human Molecular Genetics, PLOS ONE, Atherosclerosis, BMC Cancer, PeerJ, Journal of Experimental & Clinical Cancer Research, Frontiers in Genetics, Aging-us, Future Oncology, Apoptosis, BioMed Research International, International Journal of Molecular Sciences, Acta Biochimica et Biophysica Sinica, FEBS letter, Human Cell, Cellular and Molecular Neurobiology, Oncotarget, Molecular Medicine, DNA and Cell Biology, Journal of Molecular Medicine, World Journal of Gastroenterology, Journal of Cellular Biochemistry, Journal of Cardiovascular Medicine, Gene, Clinical and Experimental metastasis, International Journal of Cancer, Neurological Sciences, Biochimica et Biophysica Acta (BBA).

Consultant for the evaluation of National and International Grants

University of Rome Tor Vergata (Beyond Borders) Italy, FIRB Giovani 2013 (Italian Ministry of University and Research); AIDS Grant Programme (Italian Ministry of Health); Bandi SIR (Italian Ministry of University and Research), The Wellcome Trust/DBT-India Alliance; The Wellcome Trust, London-UK; "Rita Levi Montalcini Program" (Italian Ministry University and Research); North West Cancer Research Grant Application-UK; ICGEB (International Centre for Genetic Engineering and Biotechnology) Research Grants (Trieste Italy); French National Research Agency (ANR); ANVUR (Italian National Agency for the Evaluation of the University System and Research).

Dr Ghigna is included in the register of independent Italian and foreign scientific experts (Italian Ministry of University and Research, <https://reprise.cineca.it>)

Editor

- **2021. Special Issue:** “•Cancer Genomics: Interpreting the Changing Landscape in Cancer Diagnosis and Treatment” in *Cancers*”; ISSN: 2072-6694
- **2019. Special Issue:** “Alternative Splicing: Recent Insights into Mechanisms
- **2019. Special Issue:** “Alternative Splicing: Recent Insights into Mechanisms and Functional Role” in *Cells*”; ISSN 2073-4409
- **2015. Special Issue:** “Posttranscriptional Regulation and RNA Binding Proteins in Cancer Biology”. *BioMed Research International*.
- **2013. Special Issue:** “Alternative splicing: role in cancer development and progression” in *International Journal of Cell Biology*

Editorial Board

Journal of Gene Therapy and Research
International Journal of Molecular Sciences
Frontiers in Genetics

Teaching

Since 2006 Faculty member - PhD program in “Genetics, Molecular and Cell Biology”, University of Pavia

Patent

Italian Nr.102018000007726. Nuova isoforma della molecola di adesione L1 della superficie cellulare avente elevata attività angiogenica

Prizes

Best young researcher, Italian National Research Council (CNR), 2009

SCIENTIFIC COLLABORATIONS

- Elisabetta Dejana (IFOM-IEO, Milano - Italia);
- Anne Eichmann (Yale University School of Medicine, New Haven, CT, USA);
- Benjamin J. Blencowe (University of Toronto, Toronto - Canada);
- Patrick Mehlen (Centre de Recherche en Cancérologie de Lyon, INSERM U1052-CNRS and Université de Lyon, Université Claude Bernard Lyon – France)
- Ugo Cavallaro (European Institute of Oncology - IEO, Milano - Italy);
- Manuel Irimia (EMBL/CRG Research Unit in Systems Biology, Centre for Genomic Regulation (CRG), Barcelona – Spain);
- Marco Presta (Department of Molecular and Translational Medicine, University of Brescia, Brescia - Italy);
- Serena Zacchigna (Molecular Medicine Laboratory, ICGEB, Trieste – Italy).
- Emanuele Buratti (International Centre for Genetic Engineering and Biotechnology - ICGEB, Trieste - Italy);
- Davide Gabellini (Fondazione San Raffaele del Monte Tabor, Milano – Italia);

- Giuseppe Biamonti (Institute of Molecular Genetics, National Research Council IGM-CNR, Pavia – Italy);
- Claudio Sette (University of Rome Tor Vergata, Roma - Italy);
- Maria Paola Paronetto (IRCCS Santa Lucia Foundation and Università del Foro Italico, Roma - Italy).
- Angela Bachi (IFOM-IEO, Milano - Italia);
- Paolo Maiuri (IFOM-IEO, Milano - Italia);
- Haihong Shen (Gwangju Institute of Science and Technology, Gwangju - Korea.
- William Vermi (Department of Molecular and Translational Medicine, University of Brescia)
- Anna Pistocchi (Department of Medical Biotechnology and Translational Medicine, University of Milan)
- Federico Forneris (Armenise-Harvard Laboratory of Structural Biology, Dept. Biology and Biotechnology, University of Pavia, Pavia, - Italy);
- Raffaella Giavazzi Giavazzi R (Istituto Mario Negri, Milan – Italy)

Settori ERC:

LS1_4 RNA synthesis, processing, modification, degradation

LS4_6 Fundamental mechanisms underlying cancer

Personal statement/scientific interests

I have an extensive experience in the study of post-transcriptional regulation of gene expression and how it impinges on key physiological and pathological conditions, including cancer. In this respect, I contributed seminal work on how changes in expression/activity of splicing factors influence the alternative splicing (AS) of cancer-associated genes and directly promote tumor progression. For the first time, I demonstrated a direct link between AS modulation and regulation of cell motility, a process with crucial implications in embryogenesis, tissue formation and tumor metastasis. In addition, I provided fundamental knowledge concerning the AS control of epithelial–mesenchymal transition, which is crucial for the formation of metastases, and its integration with signaling pathways. Importantly, I also used the knowledge gained through these studies to target cancer-specific AS variants as possible anti-cancer strategy. More recently, I elucidated the molecular mechanisms through which AS plays a role in angiogenesis and in tumor vasculature.