

UNIVERSITÀ DEGLI STUDI DI MILANO

Procedura di selezione per la chiamata a professore di II fascia da ricoprire ai sensi dell'art. 18, commi 1 e 4, della Legge n. 240/2010 per il settore concorsuale 05/E2 - BIOLOGIA MOLECOLARE ,
(settore scientifico-disciplinare BIO/11 - BIOLOGIA MOLECOLARE)
presso il Dipartimento di Dipartimento di Biotecnologie Mediche e Medicina Traslazionale, Codice concorso 5432
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Francesco Nicassio



CURRICULUM VITAE

INFORMAZIONI PERSONALI

COGNOME	NICASSIO
NOME	FRANCESCO
DATA DI NASCITA	21/06/1976

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 [HTTPS://WWW.IIT.IT/IT/PEOPLE-DETAILS/-/PEOPLE/FRANCESCO-NICASSIO](https://www.iit.it/it/people-details/-/people/francesco-nicassio)
 [HTTPS://GITHUB.COM/NICASSIOLAB](https://github.com/nicassiolab)

Brief Biosketch

Dr. Nicassio is *Senior Researcher* (Tenured) and Principal Investigator of the “*Genomic Science*” research line at the Center of Genomic Science (CGS-IIT@SEMM) in Milan.

He was born in Bari, where he graduated in Biology in 2000. He got a Ph.D. in Life Science in 2004 as a student enrolled in the Open University and working at the European Institute of Oncology (IEO-Milan) with Prof. Pier Paolo Di Fiore. He joined the IIT in 2012 as Researcher, starting his scientific group. In 2017 he was appointed as the *Coordinator* of the Center of Genomic Science (CGS), supervising, directing, and managing scientific activities of CGS and related infrastructure (approximately 40 people). In 2022, he was tenured as Senior Researcher.

The *Center of Genomic Science (CGS)* is one of the 11 research centers of the *Istituto Italiano di Tecnologia (IIT)*. The mission of the Center is to acquire, develop and apply genomic technologies towards a better understanding of biological processes and diseases, with emphasis on Cancer and RNA biology. The center benefits with the close ties with European Institute of Oncology (IEO-hospital, in Milano), one of the largest cancer hospitals, which hosts lab spaces and provide complementary infrastructure as well access to clinical data and biological samples for cancer studies.

Dr. Nicassio scientific group consists of 19 people (1 technologist, 4 post docs, 6 PhD students, 2 research fellows; 1 lab technician, 2 external collaborators, and 3 affiliated researchers) organized into two research units: *Functional Non-coding Genomics* and *Computational RNA biology*. Scientific interests are centered on the exploitation of genomic approaches to the study of mechanisms in control of gene expression dynamics provided by non-coding RNAs (microRNAs, long noncoding RNAs and enhancer) and their impact on cell behaviour and human disease, with emphasis on Cancer. Research activity is based on the modern concept of a hybrid lab (<https://github.com/nicassiolab>), integrating experimental research with computational methodologies. Scientific strategy leverages the wide experience obtained in exploiting high-throughput experimental and -omics approaches to RNA biology, including i) all the state-of-the-art sequencing approaches (bulk RNA and small RNA sequencing, and recently single-cell omics and Nanopore sequencing), ii) CRISPR-based genetic approaches (CRISPR/cas9, CRISPRi and CRISPRa) exploited at individual gene level and at group level for functional screenings (CRISPR-library, CROP-seq approaches). Genomic Research is applied on highly valuable cancer models used to investigate the modes and the mechanisms of non-coding RNA biology also at preclinical level (cancer cell lines, primary samples and cultures, patient-derived xenografts (PDX) and 3D organoids (PDOs).

He is recognized for the key contribution in the field of *non-coding RNAs*, in particular for characterizing the function and regulation of microRNAs in the gene expression regulatory network. He pioneered the exploitation of circulating microRNAs for diagnostic purposes in cancer, developing one of the first signatures of circulating miRNAs, instrumental in identifying asymptomatic early-stage lung cancers in screening cohorts. Recently he has brought to attention the mechanisms of miRNA degradation, highlighting the involvement of a novel mechanism, termed Target-Dependent miRNA degradation (TDMD), to whose discovery his lab decisively contributed. In last years, he has implemented technological platforms for RNA research in IIT, including single-cell platforms (single cell RNAseq, multi-omics), CRISPR-based optical pooled screening (CROP) and single molecule analysis of native RNA (Nanopore RNA sequencing) and

developed ad hoc tools for their application to human disease and clinical research.

In addition to sharing an unbridled passion for science, Francesco Nicassio is also a spunky traveler and indomitable sportsman, fond of endurance, outdoor and dynamic sports, such as triathlon, marathon, yoga (power yoga, ashtanga), and parkour (art du déplacement - ADD). He is also known for his participation in awareness campaigns promoted by the AIRC for cancer research fundraising and supporting both science and sport.

TITOLI

TITOLO DI STUDIO

1995 - 2000

[Laurea \(vecchio ordin.\) in Scienze Biologiche, Università degli studi di Bari](#)

- **Indirizzo di specializzazione:** Biologia Molecolare
- **Votazione finale:** 110/110 cum laude
- **Supervisor:** prof. Raffaele Gallerani
- **Thesis Title:** "Analisi trascrizionale del raggruppamento genico trnC-trnN-trnY nel genoma mitocondiale di *Helianthus annuus*"

TITOLO DI DOTTORE DI RICERCA O EQUIVALENTI, OVVERO, PER I SETTORI INTERESSATI, DEL DIPLOMA DI SPECIALIZZAZIONE MEDICA O EQUIVALENTE, CONSEGUITO IN ITALIA O ALL'ESTERO

2001 - 2005

[Dottorato di Ricerca \(PhD in Life Science\) - Open University, London \(U.K.\)](#)

- **Affiliated Research Center:** Istituto Europeo di Oncologia (IEO), Milano
- **PhD Supervisor:** prof. Pier Paolo Di Fiore
- **Thesis Title:** E1A-induced genes in cell cycle re-entry on TD cells: cell cycle regulation and involvement in cancer

ABILITAZIONI SCIENTIFICHE

Abilitazione Scientifica Nazionale (ASN)

[Abilitazione Scientifica come Professore di I Fascia](#)

- 05/E2 BIOLOGIA MOLECOLARE valido dal 12/05/2021 al 12/05/2030)
- 05/I1 GENETICA valido dal 09/11/2023 al 09/11/2034)
- 05/F1 BIOLOGIA APPLICATA valido dal 17/05/2023 al 17/01/2034)

ATTIVITÀ DIDATTICA

Teaching and Educational Activities

Since 2017 Dr. Nicassio is **Faculty Member** of the Ph.D. Programme in Systems Medicine at SEMM - European School of Molecular Medicine, Milan (Italy).

Dr. Nicassio has supervised

- **Master students** (N=6, of which 4 previously + 2 currently supervising) from University of Milan Bicocca, Milan (Italy), Biotechnology at San Raffaele Vita-Salute University, Milan (Italy) and University of Bari, Bari (Italy), Università degli studi Milano Statale, Milan Italy)
- **Ph.D. students** (PhD, N=6, of which 3 previously + 3 currently supervising) of the Ph.D. Programme in Systems Medicine at SEMM - European School of Molecular Medicine, Milan (Italy). See the list below.
- **Post-doctoral level fellows** (N>10), including some from the EMBL-IIT (ETPOD, N=2, F. Nadalin and L. Mulroney) postdoctoral fellowship program and MSCA Post-doctoral fellowship program (N=1, V. Brancato).

INSEGNAMENTI E MODULI

Since 2016 Dr. Nicassio also served as **Lecturer** for the Ph.D. Programme in Systems Medicine at SEMM- European School of Molecular Medicine, Milan (Italy).

- Courses for the Ph.D. Programme in Systems Medicine at SEMM (approx. 4-6h per year):
 - Principles of molecular oncology - Lecture "The Non-Coding landscape: functions and regulation of complex genomes by regulatory RNAs
 - Genomics - Lecture "Non-Coding RNAs"
 - Biochemistry and Molecular Biology Techniques - Lecture "Expression of coding and noncoding genes in mammalian genome"
 - Genomics - Lecture "Non-Coding RNAs"

ATTIVITÀ DI DIDATTICA INTEGRATIVA E DI SERVIZIO AGLI STUDENTI

ATTIVITÀ DI RELATORE DI ELABORATI DI LAUREA, DI TESI DI LAUREA MAGISTRALE, DI TESI DI DOTTORATO

E DI TESI DI SPECIALIZZAZIONE

Director of Studies for the PhD Program (SEMM -European School of Molecular Medicine) - University of Milan

- A.A.2015/2016 Francesco Ghini (PhD in System Medicine) - degree awarded - Matr. R10316
- A.A.2020/2021 Carmela Rubolino (PhD in System Medicine) - degree awarded - Matr. R12438
- A.A.2020/2021 Bianca Giuliani (PhD in System Medicine) - degree awarded - Matr. R12115
- A.A.2021/2022 Maria Pirra Piscazzi (PhD in System Medicine) - ongoing -
- A.A.2021/2022 Camilla Ugolini (PhD in System Medicine) - ongoing -
- A.A.2022/2023 Chiara Finocchiaro (PhD in System Medicine) - ongoing -
- A.A.2023/2024 Giada Tria (PhD in System Medicine) - ongoing -
- A.A.2023/2024 Alessandro D'agnelli (PhD in System Medicine) - ongoing -

ATTIVITÀ DI TUTORATO DEGLI STUDENTI DI CORSI DI LAUREA E DI LAUREA MAGISTRALE E DI TUTORATO DI DOTTORANDI DI RICERCA

ESAMINATORE DI TESI DI DOTTORATO

- (A.A. 2022/2023) DOTTORATO DI RICERCA IN MEDICINA MOLECOLARE - *Università Vita-Salute San Raffaele*, Milano - Chiara Bressti. "EXPLOITING microRNA NETWORKS IN TUMOR-ASSOCIATED MACROPHAGES TO BOOST TUMOR IMMUNITY"
- (A.A. 2019/2020) DOTTORATO DI RICERCA IN GENETICA E BIOLOGIA MOLECOLARE - *XXXIII Ciclo - Università di Roma La Sapienza* - Andrea Carvelli. "The long non-coding RNA lncMN2 functions as a competing endogenous RNA in motor neuron differentiation"
- (A.A. 2019/2020) Programa de doctorat en Biomedicina Universitat Pompeu Fabra (UPF) - Alessandro Dasti "Role of the STAR proteins in early mammalian development and pluripotency"
- PhD in Sciences de la Vie et de la Santé, Interactions Moléculaires et Cellulaires (A.A. 2020/2021) *Université Côte d'Azur* - Sofia Fazio. "Role of Ro60/RNYs complex in lipid-laden macrophages"
- (A.A. 2016/2017) DOTTORATO DI RICERCA IN BIOMEDICINA MOLECOLARE - *Università degli Studi di Trieste*, Trieste - Manuel Caputo. "DEPDC1A, a novel SREBP1 cofactor, regulates fatty acid metabolism in breast cancer"

SEMINARI PRESSO UNIVERSITA' O ISTITUTI DI RICERCA SCIENTIFICA

(selected, last 5 years)

- 2023) *Coding and Noncoding RNAs in Cancer Mechanisms* - Department of Cellular, Computational and Integrative Biology (CIBIO), University of Trento, Italy
- 2023 *Coding and Noncoding RNAs in Cancer Mechanisms* - Dipartimento di Medicina Molecolare, University of Padova
- 2023 *Interplay of Coding and Noncoding RNAs in Cancer Mechanisms* - Centre de Biologie Intégrative, Toulouse, France
- 2023 Le nuove sfide della Genomica: l'eterogeneità molecolare ed il ruolo dell'RNA - UniStem Day XV, Università di Bari
- 2022 New insights into miRNA biology and human cancer- Vall Hebron Institut d'Oncologia (VHIO) - Spain
- 2021 Interplay between coding and non-coding genes in transcriptional dynamics - KU Leuven - Belgium
- 2019 microRNA degradation in human physiology and pathology - Center for Genetic Regulation, Barcelona - Spain
- 2019 The genomic R-evolution: interplay of coding and noncoding genes in transcriptional dynamics - University of Turin
- 2019 Transcriptional dynamics in the human genome - Azienda Unità Sanitaria Locale, Reggio Emilia
- 2018 Expression Regulation of the mammalian genome by non-coding RNAs - University of Rome - La Sapienza
- 2018 Expression Regulation of the mammalian genome by non-coding RNAs - Istituto Nazionale Tumori, Milano
- 2018 Functions and regulation of microRNAs in development and disease - University of Pavia

ATTIVITÀ DI RICERCA SCIENTIFICA

ORGANIZZAZIONE, DIREZIONE E COORDINAMENTO DI CENTRI O GRUPPI DI RICERCA NAZIONALI E INTERNAZIONALI O PARTECIPAZIONE AGLI STESSI

- 2017 -present Center Coordinator
[Istituto Italiano di Tecnologia \(IIT\)](#) - Center for Genomic Science of IIT@SEMM - Milan (Italy)
 - **Managing Duties:** managing overall budget, personnel, and facilities of the Center
 - **Scientific Duties:** coordinating the research activity of the whole Center; scientific networking and liaising at national and international level; securing funding through grants applications, service contracts and industrial partnerships

Business or sector: Research and Technology

- 2022 -present **Senior Researcher (Tenured Principal investigator)**
[Istituto Italiano di Tecnologia \(IIT\) - Center for Genomic Science of IIT@SEMM - Milan \(Italy\)](#)
Research Line: Genomic Science
- **Scientific Duties:** coordinating the research activity of Noncoding genome Lab; securing funding through grants applications, national and international scientific networks, service contracts and industrial partnerships.
 - **Teaching Duties:** European School of Molecular Medicine (SEMM - Milan) Faculty Member; supervising PhD, graduate, and undergraduate students; director of studies, internal supervisor, and examiner for PhD doctoral degree for students enrolled at SEMM; teaching activities for first- and second-year PhD students enrolled at SEMM
- Business or sector: Research and Technology
- 2012 - present **Researcher**
[Istituto Italiano di Tecnologia \(IIT\) - Center for Genomic Science of IIT@SEMM - Milan \(Italy\)](#)
- **Scientific Duties:** coordinating the research activity of the Nicassio Lab (Noncoding genome lab); scientific networking and liaising at national and international level; securing funding through grants applications
 - **Teaching Duties:** supervising graduate and undergraduate students, director of studies, internal supervisor and examiner for PhD students enrolled at SEMM; teaching activities for first- and second-year PhD students at SEMM
- Business or sector: Research and Technology
- 2012-2014 **Scientific Advisor (external collaborator)**
[Istituto Europeo di Oncologia \(IEO\) - Milan \(Italy\)](#)
- Advising on the development of cancer diagnostic tools based on circulating microRNAs
- Business or sector: Research and Healthcare
- 2011-2012 **Scientist**
[Istituto Europeo di Oncologia \(IEO\), Milan \(Italy\) - Molecular Medicine Program](#)
- Coordinating research projects and Experimental research activity on microRNA and gene expression mechanisms in cancer; Supervising and training undergraduate and PhD students Head: Prof. Pier Paolo Di Fiore
- Business or sector: Research and Healthcare
- 2005-2011 **Research Fellow (Post-Doctoral Level)**
[IFOM - FIRC Institute for Molecular Oncology, Milan \(Italy\)](#)
- Experimental research activity on cancer biology, microRNA, and gene expression mechanisms; Supervising and training undergraduate and PhD students Head: Prof. Pier Paolo Di Fiore
- Business or sector: Research and Technology
- 2001-2005 **Research Fellow (PhD Level)**
[IFOM - FIRC Institute for Molecular Oncology, Milan \(Italy\)](#)
- Experimental research activity on cancer mechanisms, oncogenic viruses, and gene expression control mechanisms. Head: Prof. Pier Paolo Di Fiore
- Business or sector: Research and Technology
- 2000-2001 **Research Fellow (graduate student level)**
[Istituto Europeo di Oncologia \(IEO\), Milan \(Italy\)](#)
- Experimental research activity on cancer mechanisms, characterization of NP95/UHRF1, histone-binding protein.
 - Head: Prof. Pier Paolo Di Fiore
- Business or sector: Research and Healthcare

ATTIVITÀ QUALI LA DIREZIONE O LA PARTECIPAZIONE A COMITATI EDITORIALI DI RIVISTE SCIENTIFICHE

- **Associated Editor (2018-2023)** for Frontiers in Molecular Biosciences - section Ribonucleoprotein Networks.
- **Reviewer** for the following journals:
[Molecular Cell](#), [Nature Biotechnology](#), [Nucleic Acid Research](#), [NAR Genomics](#), [Review Commons](#), [Development](#), [Scientific Reports](#), [Journal of Cell Biology](#), [Clinical Chemistry](#), [FEBS journal](#), [Molecular Biotechnology](#), [Acta Biochimica Biophysica Sinica](#), [Gene](#), [PLOS One](#), [Journal of Thoracic Oncology](#), [Molecular Oncology](#), [BMC Cancer](#), [BMC Genomics](#), [Oncotarget](#), [Briefings in Functional genomics](#), [Frontiers](#).

Attività di valutazione nell'ambito di procedure di selezione competitive nazionali e internazionali

- **Panel Member** for the reviewing process for the following agencies/programs:
 - [ERC](#) European Research Council - expert reviewer for starting (StG) and synergy grant (SyG)
 - [INCa](#) French National Cancer Institute
 - [PRIN](#) (Progetti di Ricerca di Rilevante Interesse Nazionale) - Italy
 - [FNSNF](#) (Swiss National Science Foundation) - Switzerland
 - [MRC](#) (Medical Research Council) - UK
 - [BBSRC](#) (Biotechnology and Biological Sciences Research Council) - UK
 - [ANR](#) (Agence Nationale de la Recherche) - France
 - [NWO](#) (Netherlands Organisation for Scientific Research) - Netherlands
 - [Ministry of Education of the Hellenic Republic](#) - Greece
 - [BSF](#) (U.S.-Israel Binational Science Foundation) - Israel
- **Panel Member for the Scientific Advisory Board (SAB)** for the following institute/research centers:
 - [C3M \(InsermU1065\)](#) Science Advisory Board (2016/2021)

Affiliazione ad accademie scientifiche nazionali e internazionali

- [RNA Society](#) (Full Member since 2016);
- [AACR](#) - American Association for Cancer Research (Active Member since 2018);
- [ABCD](#) - Associazione di Biologia Cellulare e di Differenziamento (Member since 2011);
- [SIBBM](#) - Società Italiana di Biofisica e di Biologia Molecolare (Member since 2019);

TITOLARITÀ DI BREVETTI

- **Patent application, International Publication No WO/2006/037462 PCT/EP2005/010153 CANCER MARKERS:** The invention relates to novel markers for cancer, and the use of these markers in assessment of disease conditions and in therapy. The invention relates to methods of diagnosis and prognosis of cancer, the methods comprising determining the level of one or more gene products. In addition, the invention relates to modulators of the gene products for use in treatment of cancer. The genes include E1A-induced genes and Numb. FN is co-inventor of the patent. **Inventor:** Pier Paolo Di Fiore, Pece Salvatore, Ian Marc Bonapace, Francesco Nicassio, Fabrizio Bianchi, Manuela Vecchi, Stefano Confalonieri. **Classification:** Specifically defined cancers of breast (G01N33/57415)
- **Patent application, International Publication No WO/2008/125791 PCT/GB2007/001343 CANCER MARKERS:** The invention relates to novel markers for cancer, and the use of these markers in assessment of disease conditions and particularly in prognosis and in therapy of Lung Cancer. The invention relates to methods of diagnosis and prognosis of cancer, and in particular NSCLC, the methods comprising determining the expression level of one or more genes. In some embodiments the invention relates to prognosis of early stage NSCLC. FN is co-inventor of the patent. **Inventor:** Pier Paolo Di Fiore, Fabrizio Bianchi, Francesco Nicassio. **Classification:** nucleic acid based cancer diagnostic products (C12Q1/6886).
- **Patent application, International Publication No WO/2012/089630 A1 PCT/EP2011/073868 A METHOD TO IDENTIFY ASYMPTOMATIC HIGH-RISK INDIVIDUALS WITH EARLY STAGE LUNG CANCER BY MEANS OF DETECTING miRNAs IN BIOLOGIC FLUIDS:** The object of the invention is a predictive method for the detection and/or exclusion of lung cancer, which involves the measurement of expression levels of miRNA in the test sample, involving: – Detection, in the biological sample, of at least 3 miRNAs from the list of 24 miRNAs, and determination of the amounts of the indicated miRNAs relative to the control sample. Furthermore, an object of the invention is also the use of this method for the detection of lung cancer in individuals at high risk of lung cancer. **Inventor:** Pier Paolo Di Fiore, Fabrizio Bianchi, Francesco Nicassio, Matteo Jacopo Luca Nicolo MARZI. **Classification:** nucleic acid based cancer diagnostic products (C12Q1/6886).
- **Patent application, International Publication WO/2016/038119 A1 PCT/EP2015/070664 METHOD FOR LUNG CANCER TREATMENT:** The disclosure describes a method for diagnosing lung cancer in a subject by detecting in a biological sample obtained from that patient a miRNA signature, the presence of which provides an earlier indication of cancer than alternative art-recognized methods, including, but not limited to, low-dose computed tomography (LDCT). **Inventor:** Pier Paolo Di Fiore, Fabrizio Bianchi, Francesco Nicassio, Matteo Jacopo Luca Nicolo MARZI, Francesca MONTANI. **Classification:** nucleic acid based cancer diagnostic products (C12Q1/6886).

PREMI E RICONOSCIMENTI NAZIONALI E INTERNAZIONALI PER ATTIVITÀ DI RICERCA

Finanziamenti Competitivi in qualità di Responsabile Scientifico

- 2020 - 2025 [Fondazione AIRC \(Italian Association for Cancer Research\)](#) - Investigator Grant Award - IG22851
945K euros granted to FN as Principal Investigator.
Title: Target-directed miRNA degradation mechanism: role and implications in breast cancer.
- 2022 - 2025 [Bando POS - traiettoria 3](#) - PROGETTO GENERA -
280K euros granted - FN as Principal Investigator together with S. Gustincich and A. Cavalli
IT aims to develop nanopore-based “third generation” sequencing technology.

- 2022 - 2025 [CN3 - Progetto “National Center for Gene Therapy and Drug sbased on RNA Technology”](#). CN00000041- [NextGeneration EU](#) - PNRR MUR - FN as Principal investigator (**Spoke 6**)
800K euros granted - *Task 6.1.2 Implementation of native RNA sequencing technology (Task leader: Nicassio-IIT)*
 - 2022 - 2025 [Horizon Europe \(HORIZON\)](#) - HORIZON-MSCA-2021-DN-01- Project: 101072892 – **LongTREC**
LongTREC: The Long-reads TRanscriptome European Consortium: The next generation transcriptome biology revealed by single molecule sequencing technologies.
259.K euros granted to IIT as Beneficiary - FN as Principal Investigator
 - 2022 - 2025 [European Project - GDI](#) - GENOMIC DATA INFRASTRUCUTRE. Project: 101081813
328K euros granted to IIT - FN as Principal Investigator
- Expired grants*
- 2016 - 2020 [Cariplo Foundation](#) - Investigator Grant Award.
325.5K euros granted to FN as Principal Investigator
Title: The Role of the astrocyte-mediated circadian clock in neurodegeneration and brain aging
 - 2017 - 2019 [Fondazione AIRC \(Italian Association for Cancer Research\)](#) - Investigator Grant Award - IG14085
573K euros granted to FN as Principal Investigator.
Title: MicroRNA degradation dynamics in human cancer
 - 2014 - 2016 [Fondazione AIRC \(Italian Association for Cancer Research\)](#) - Investigator Grant Award - IG18774
285K euros granted to FN as Principal Investigator.
Title: Non-coding RNAs as modifiers of stem cell properties in breast cancer: a whole genome approach
 - 2016 - 2020 [Umberto Veronesi Foundation](#) - Research Grant Award.
110K euros granted to FN as Principal Investigator
Title: Identification of circulating non-coding RNAs as biomarkers for tumor diagnosis by “next-generation sequencing

PARTECIPAZIONE IN QUALITÀ DI RELATORE A CONGRESSI E CONVEGNI DI INTERESSE INTERNAZIONALE

(Last 5 years, selected)

- 2023 **Invited Keynote Speaker** at the [ABCD NATIONAL CONGRESS 2023](#) (Paestum, Italy)
- 2023 **Invited Speaker** at the “[InteRNat](#)” summer school on small regulatory RNAs” (Montpellier, France)
- 2023 **Selected Speaker** at the 2022 [SIBBM Meeting](#) Beyond Genomics: Next Generation Molecular Biology (Bari, Italy)
- 2023 **Selected Speaker** at the [EMBO NonCoding RNA medicine](#) -15-18 May 2023 (Poznam, Poland) “Killing miR-softly: new clues to microRNA degradation in human cancer”
- 2023 **Co-organizer and Speaker** of the “[Training course in computational methods for epitranscriptomics](#)”. The course was organized on behalf of the Italian ELIXIR-IIB Training Platform (Workshop/training) - 26-28 April 2023 - (Bari, Italy)
- 2023 **Co-organizer** at the [Single Molecule Sequencing Technologies & Applications](#) (Workshop/symposium) - 31st march 2023 - (Milan, Italy)
- 2022 **Invited Speaker** at the 4th [Aegean Conference](#) The long and the short of non-coding RNAs (Rhodes, Greece)
- 2022 **Faculty and Co-organizer** at the 2022 [SIBBM Meeting](#) RNA world 3.0 (Rome, Italy)
- 2022 **Invited Speaker** at the [RNA 2022](#) “The multiple facets of RNA in development and disease” (Nice, France)
- 2021 **Invited Speaker** at the “[InteRNat](#)” summer school on small regulatory RNAs” (Montpellier, France)
- 2021 **Selected Speaker** at the “[EMBO symposia](#) 2017: Non-coding Genome” (Heidelberg) (Germany)
- 2020 **Invited Speaker** at the “Fourth International and Sixteenth [Iranian Genetics Congress](#)” (Teheran, Iran)
- 2019 **Invited Speaker** at the [IEO Workshop](#) “Hereditary Breast and Gastric Cancers: Prevention, Genetics and Care” (Milan, Italy)
- 2019 **Invited Speaker** at the “[Hellenic Society for Computational Biology and Bioinformatics HSCBB meeting](#)” (Patras, Greece)
- 2018 **Invited Speaker** at the “[IEO Alumni Meeting](#)” (Milan, Italy)
- 2018 **Invited Speaker** at the [Ettore Majorana Workshop](#) “Epigenetics in Cognition” (Erice, Italy)”

PUBBLICAZIONI SCIENTIFICHE

Total Publications: 46

Last/Co-last: 16 First/Co-first: 4;

h-index (scopus): 23

Research Articles

1. Giamb Bruno R, Zacco E, Ugolini C, Vandelli A, Mulrone y L, D’Onghia M, Giuliani B, Criscuolo E, Castelli M, Clementi N, Clementi M, Mancini N, Bonaldi T, Gustincich S, Leonardi T, Tartaglia GG, **Nicassio F** “Unveiling the role of PUS7-mediated pseudouridylation in host protein interactions specific for the SARS-CoV-2 RNA genome. *Mol Ther Nucleic Acids*. 2023 Oct 25;34:102052. doi: 10.1016/j.omtn.2023.102052. eCollection 2023 Dec 12. PMID: 38028201
2. Lattanzi G, Strati F, Díaz-Basabe A, Perillo F, Amoroso C, Protti G, Rita Giuffrè M, Iachini L, Baeri A, Baldari L, Cassinotti E, Ghidini M, Galassi B, Lopez G, Noviello D, Porretti L, Trombetta E, Messuti E, Mazzarella L, Iezzi G,

Nicassio F, Granucci F, Vecchi M, Caprioli F, Facciotti F. "iNKT cell-neutrophil crosstalk promotes colorectal cancer pathogenesis. *Mucosal Immunol.* 2023 Jun;16(3):326-340. doi: 10.1016/j.mucimm.2023.03.006. Epub 2023 Mar 31. PMID: 37004750

3. Giuliani B, Tordonato C, Nicassio F. "Mechanisms of Long Non-Coding RNA in Breast Cancer". *Int J Mol Sci.* 2023 Feb 25;24(5):4538. doi: 10.3390/ijms24054538 - Review
4. Mulroney L, Birney E, Leonardi T, Nicassio F. "Using Nanopore to Identify RNA Modifications from Direct RNA Nanopore Sequencing Data." *Curr Protoc.* 2023 Feb;3(2):e683. doi: 10.1002/cpz1.683.
5. Giambruno R and Nicassio F. "Proximity-dependent biotinylation technologies for mapping RNA-protein interactions in live cells." *Front Mol Biosci.* 2022 Nov 14;9:1062448. doi: 10.3389/fmolb.2022.1062448 - Review
6. Carvelli A, Setti A, Desideri F, Galfrè SG, Biscarini S, Santini T, Colantoni A, Peruzzi G, Marzi MJ, Caputo D, Di Angelantonio S, Ballarino M, Nicassio F, Laneve P, Bozzoni I. "A multifunctional locus controls motor neuron differentiation through short and long noncoding RNAs." *EMBO J.* 2022 Jul 4;41(13):e108918. doi: 10.15252/emboj.2021108918.
7. Ugolini C, Mulroney L, Leger A, Castelli M, Criscuolo E, Williamson MK, Davidson AD, Almuqrin A, Giambruno R, Jain M, Frigè G, Olsen H, Tzertzinis G, Schildkraut I, Wulf MG, Corrêa IR, Ettwiller L, Clementi N, Clementi M, Mancini N, Birney E, Akeson M, Nicassio F, Matthews DA, Leonardi T. "Nanopore Recappable sequencing maps SARS-CoV-2 5' capping sites and provides new insights into the structure of sgRNAs" *Nucleic Acids Res.* 2022 Mar 4;gkac144. doi: 10.1093/nar/gkac144. Online ahead of print.
8. Simeone I, Rubolino C, Noviello T, Farinello D, Cerulo L, Marzi MJ, Nicassio F. "Prediction and pan-cancer analysis of mammalian transcripts involved in target directed miRNA degradation" *Nucleic Acids Res.* 2022. Feb 28;50(4):2019-2035. doi: 10.1093/nar/gkac057.
9. Bido S, Muggeo S, Massimino L, Marzi MJ, Giannelli SG, Melacini E, Nannoni M, Gambarè D, Bellini E, Ordazzo G, Rossi G, Maffezzini C, Iannelli A, Luoni M, Bacigaluppi M, Gregori S, Nicassio F, Broccoli V. Microglia-specific overexpression of α -synuclein leads to severe dopaminergic neurodegeneration by phagocytic exhaustion and oxidative toxicity. *Nat Commun.* 2021 Oct 29;12(1):6237. doi: 10.1038/s41467-021-26519-x.
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Invited Book Chapters

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Editorial/Opinions

43. Brancato V, Brentari I, Coscujuela Tarrero L, Furlan M, Nicassio F., Denti MA. "News from around the RNA world: new avenues in RNA biology, biotechnology and therapeutics from the 2022 SIBBM meeting". *Biol Open.* 2022 Oct 15;11(10):bio059597. doi: 10.1242/bio.059597. Epub 2022 Oct 14.
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ATTIVITÀ GESTIONALI, ORGANIZZATIVE E DI SERVIZIO

INCARICHI DI GESTIONE E AD IMPEGNI ASSUNTI IN ORGANI COLLEGIALI E COMMISSIONI, PRESSO RILEVANTI ENTI PUBBLICI E PRIVATI E ORGANIZZAZIONI SCIENTIFICHE E CULTURALI, OVVERO PRESSO L'ATENEO O ALTRI ATENEI

- Since 2017 **Budget and Personnel Management** at CGS-IIT@SEMM (Italy), about 40 people.
- Since 2020 **Co-coordinator** of the flagship scientific program named *RNA-initiative* at IIT, a program to create non-incremental knowledge in RNA biology, RNA technologies and drug discovery which involves 18 PIs and total of >100 Scientists (<https://www.iit.it/it/web/irna/home>).
- Since 2017 **Renewal of legal and IP related documents** (including laboratory and office space rent agreement, administration contracts) that grant functionality of CGS-IIT@SEMM with neighboring entities: Istituto Europeo di Oncologia (IEO - <https://www.research.ieu.it>), Istituto FIRC di Oncologia Molecolare (IFOM - <https://www.ifom.eu>) Scuola Europea di Medicina Molecolare (SEMM - <https://www.semm.it>).
- Since 2017 **Co-supervision** of the **Genomics Unit** (run in partnership with IEO), a facility dedicated to the development and optimization of genomics applications and workflows.
- Since 2017 **Co-supervision** of the **Computational Research Unit** of CGS-IIT@SEMM, a facility dedicated to the maintenance of the genomic infrastructure and to the development of valuable genomics applications.
- 2019 -2022 Coordination of the “**Single Cell Program 1.0**” and “**Single Cell Program 2.0**”, promoted by IEO research and aimed at fostering the use of single-cell ATAC-seq, single-cell CNV, hashing and CROP-seq technologies. The SC Programs involved more than 10 Research groups from IIT and IEO with a final meeting coordinated by FN and the *Genomics Unit*
- 2019 -2022 Scientific Member of the “**Single Molecule Program**”, aimed at promoting the use of Nanopore single molecule technology by the researchers.
- 2016-2020 Scientific Member of the **O.P.B.A.** (Organism for the protection of animals used for scientific purposes) at the IFOM-IEO-IIT Campus. The members of the body perform their mandate under a confidentiality regime; the duties include to evaluates the technical-scientific relevance of the submitted project; express a reasoned opinion on research projects that use animals for scientific purposes and to advise researchers in applying the principle of replacement, reduction and improvement, which can be summarized in the “3R” principle.

Personal Skills

Lingua madre italiano

Lingue straniere

	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
inglese	C1	C1	C1	C1	C1

Livelli: A1 e A2: Utente base - B1 e B2: Utente autonomo - C1 e C2: Utente avanzato
[Quadro Comune Europeo di Riferimento delle Lingue](#)

Data

29/12/2023

Luogo

Milano

