

PERSONAL INFORMATION



Chiara Collesi

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Sex Female | Date of birth 06/08/1970 | Nationality Italian

Position Associated Professor SSD BIOS-08/A

WORK EXPERIENCE

2026-	University of Trieste, Department of Clinical, Surgical and Health Sciences Group Leader, Translational Molecular Cardiology
2022-to date	University of Trieste, Department of Clinical, Surgical and Health Sciences Associate Professor SSD BIOS-08/A
2015-2022	University of Trieste, Department of Clinical, Surgical and Health Sciences Assistant Professor, SSD BIO/11
2005-2012	International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste Post-doc fellow /Research Scientist, Molecular Medicine
2002-2004	Department of Cell Biology, Howard Hughes Medical Institute, Yale University School of Medicine, New Haven, CT Post-doc fellow, De Camilli's Laboratory
2002-2005	IFOM, FIRC Institute of Molecular Oncology, Milano. Post-doc fellow, Molecular Genetics Unit
2000-2002	DiBiT, Istituto Scientifico San Raffaele, Milano. Post-doc fellow, Molecular Genetics Unit
1992-2000	I.R.C.C. (Istituto per la Ricerca e la Cura del Cancro), Torino Associated Researcher, Molecular Oncology Unit

EDUCATION AND TRAINING

2000	PhD in Biochemistry and Clinical Chemistry University of Torino Medical School, Graduate School in Biochemistry and Clinical Chemistry; full marks: 70/70 cum laude
1995	Profession License Admitted to the Biologists' Register, University of Torino, School of Medicine
1994	Bachelor's Degree in Molecular Biology University of Torino, full marks: 110/110 cum laude
1989	High School Diploma (Maturita' Classica) Liceo Classico Vittorio Alfieri, Torino, full marks: 60/60.
1985	French Language Diploma (Alliance Française) Centre Culturel Franco-Italien, Torino, full marks: mention très honorable.

TEACHING

2021-to date	<u>BACHELOR'S DEGREE COURSES</u> University of Trieste, Department of Chemical and Pharmaceutical Sciences School of Pharmacy and Pharmaceutical Technologies Professor of Molecular Biology (BIO/11-5 CFU)
2017-to date	University of Trieste, Department of Life Sciences School of Medical Biotechnology and Functional Genomics Professor of Cellular Signaling (BIO/11-3 CFU)
2012- to date	University of Trieste, Department of Clinical, Surgical and Health Sciences School of Medicine and Dentistry Professor of Molecular Biology (BIO/11-3 CFU)
2013-2016	University of Trieste, Department of Life Sciences. School of Medical Biotechnology and Functional Genomics Professor of Molecular Biology of tissues and organs (BIO/11-6CFU)
2008-2011	University of Trieste, Department of Clinical, Surgical and Health Sciences School of Medical Biotechnology Professor at contract of Molecular Biology 1 (BIO/11-5CFU).
2006 -2009	University of Trieste, Department of Clinical, Surgical and Health Sciences

	School of Medical Biotechnology Professor at contract of Molecular Biology 2 (BIO/11-3CFU).
2001-2005	Vita e Salute University -DiBIT San Raffaele. School of Medicine Professor at contract of the Histology Preparatory Course (BIO/17).
2022- to date	<u>GRADUATE, MASTER'S AND DOCTORATE SCHOOLS</u> University of Trieste, Department of Clinical, Surgical and Health Sciences Graduate School of Pharmacology. Professor of Molecular Biology (BIO/11)
2020- to date	University of Trieste, Department of Life Sciences. PhD School in Molecular Biomedicine Professor of Molecular Biology (BIO/11)
2016- to date	University of Trieste, Department of Clinical, Surgical and Health Sciences Graduate School of Medical Genetics. Professor of Molecular Biology (BIO/11)
2014- to date	JuMBO PHD Course in Molecular Biology (ICGEB-SISSA-UniTs-UniUd) Professor of Molecular Biology (BIO/11).
2015-2018	University of Trieste, Department of Clinical, Surgical and Health Sciences Master course in Translational Research in Rheumatology Professor of the course: "Molecular biology: features and technology" (BIO/11)

PERSONAL SKILLS

Mother tongue Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	C2	C2	C2	C2	C2

Communication skills Along my professional career, I had the opportunity to meet several people, from students to eminent scientist from all over the world. I presented my data as an invited speaker in many national and international meetings. Concomitantly, I had the chance to lead to improve my communication skills thanks to the teaching activity and to some interviews to the media (TG2-33, MedlineTV, Trieste NEXT, Open Day AREA Science Park).

Organizational / managerial skills **At present I lead a team of 8 researchers** (1 post-doc, 4 PhD students, 3 undergraduate students). I'm involved as a leading scientist in national and international projects and/or collaborations with Hospitals and Universities. Since 2000, I have supervised many tens of students defending their Bachelor and PhD thesis at the University of Trieste, at the SNS in Pisa and at the University of Naples. Currently, I serve as the President of the Joint Teaching-Student Committee at the School of Medicine and as a Member of the Teaching Committee and of the Internship Committee, School of Dentistry at University of Trieste.

Job-related skills My major research interests veer toward the mechanisms of heart regeneration and the molecular bases of hereditary cardiomyopathies. To this end, we established cardiac organoid models derived from patient-induced pluripotent stem cells (iPSCs), to find a genotype-phenotype correlation and create a customized platform for validation, screening, and development of innovative RNA-based therapies, using gene transfer via lipid nanoparticles, with the aim of advancing translational, cardioprotective, and pro-regenerative therapeutic applications. Early in my scientific career, I investigated the molecular aspects of the intracellular signaling of the Met and Ron tyrosine kinase receptors, primarily involved in the stimulation of cell scattering, invasion, protection from apoptosis and angiogenesis. In the neurobiology field, during my post-doc at Yale University, I acquired skills in mouse genetics and transgenic animal engineering, I acquired advanced skills in animal surgery, particularly for the implementation of models of neurodegenerative and cardiovascular disorders.

Digital competence Microsoft Office, Adobe Creative Cloud.

ADDITIONAL INFORMATION

Past and current financial support for scientific activity

2025 - Scientific coordinator and PI (L.R. 22/2022, articolo 7, commi 56 – 61. "Sostegno a progetti di validazione di idee e tecnologie innovative che prevedano il raggiungimento di un TRL 6, 7 o 8"). Funding: 200.000 Euro from Cluster Scienze della Vita.

2025 - Scientific coordinator and PI (L.R. 22/2022, articolo 7, commi 56 – 61. "Sostegno a progetti di validazione di idee e tecnologie innovative che prevedano il raggiungimento di un TRL 6, 7 o 8"). Funding: 250.000 Euro from Regione Friuli Venezia Giulia.

2022-2025 – Scientific responsible and grant recipient of a PNRR Project Funding Mission 4, Component 2, Investment 1.4 'Potenziamento strutture di ricerca e creazione di "campioni nazionali di R&S" su alcune Key Enabling Technologies, within the overall financial resources allocated to the MUR under the MEF Decree of 6/8/2021 and 23/11/2021 - 'National

Centre for Gene Therapy and Drugs based on RNA Technology' theme 'Development of Gene Therapy and Drugs with RNA technology'. Total funding: 1.400.000 Euro (200.000 Euro to my group)
2018-2021 – FRA2018, Scientific coordinator and PI. Funding: 17500 Euro from University of Trieste

2005-2012 – ICGEB, Trieste - Post-doc fellowship, Molecular Medicine Laboratory
2002-2005 – IFOM, Milano - Assegno di Ricerca, Molecular Genetics Unit
2002-2004 – Yale University School of Medicine, New Haven, USA- Post-doc fellowship, Human Frontiers Science Program, Pietro De Camilli's laboratory, Howard Hughes Medical Institute.
2001-2002 – University of Torino, Assegno di ricerca, Tumor Immunology Laboratory 1999 – 2001- IRCC, Candiolo - Fellowship from Comitato Regionale Piemontese Gigi Ghirotti.
1997 – 1999- IRCC, Candiolo - Fellowship from Fondazione Angela Bossolasco
1994 – 1997- IRCC, Candiolo - Fellowship from Associazione Italiana Ricerca sul Cancro (AIRC)

Honours and awards 1995 – “Optime” award, for the excellence in the academic career, awarded by Unione Industriali di Torino

Memberships 2022-to date Professional member of ISHR (International Society for Heart Research)
2008-2018 Professional member of the American Heart Association
2000-2017 Member dell'Albo dell'Ordine Nazionale dei Biologi, tessera n° 050147.

Invited Seminars and Talks Invited speaker to the American Heart Association Meeting, New Orleans, Louisiana, USA (2008), to the XIII Notch Meeting, Athens (2013), to the 3rd International Summer School-Teaming up for global cardiovascular risk reduction – pathophysiology, pharmacology, therapeutics, Padua (2024), to the 4th International Summer School-Teaming up for global cardiovascular risk reduction –pathophysiology, pharmacology, therapeutics, Padua (2025).

2021 - Trieste NEXT- ICGEB Exhibition Stand and Poster
- HEALTH FESTIVAL- Back to the future. The lesson of Covid and the medicine of tomorrow
- Rai Radar. An anti-parasite drug against Covid. Interview from Daniela Picoi
- Il Piccolo (14/09/2021) Niclosamide is able to block Covid.

Patents - MEDICO E, MICHIELI P, COLLESI C., CASELLI G, COMOGLIO PM (1999). Recombinant proteins from HGF and MSP. PCT/EP99/00502; US Patent 6730657
- MEDICO E, MICHIELI P, COLLESI C., CASELLI G, COMOGLIO PM (1999). Recombinant proteins derived from HGF and MSP. PCT/EP99/00478; US Patent 6551991

Reviewer/ Panels activity/ Editorial activity 2022- to date: Frontiers in Cardiovascular Medicine - Cardiovascular Biologics and Regenerative Medicine: Review Editor
2021- to date: Frontiers in Molecular Medicine - Molecular Cardiology: Review Editor
2021- to date: Chairman of the Student-Teachers Joint Commission for of the University Evaluation Unit, Department of Clinical, Surgical and Health Sciences
2019- to date: Journal of Royal Science: Guest Editorial Board Member
2017- to date: Member of the panel of reviewers of the AREA Science Park in Trieste, Italy
2013- to date: Member of the panel of reviewers of the Italian Ministry of Education (MIUR)
2010- to date: Reviewer of several international scientific journals, as Circulation, The FASEB Journal, Journal of Cellular and Molecular Medicine, Current Drug Targets.

Publications More than 40 original manuscripts in international, peer-reviewed journals (h-index: 23, according to SCOPUS)
Full publication list:

- Perotto M, Paldino A, Mazzarotto F, Barbati G, Stroeks S, Verdonschot JAJ, Akhtar M, Elliott P, Ochoa JP, Garcia-Pavia P, de Frutos F, Sepp R, Hategan L, Prasad S, Yazdani M, Morris-Rosendahl D, Dalma Palinkas E, Girolami F, Olivetto I, Parikh VN, Fatkin D, Lakdawala N, McKenna WJ, Stolfo D, Gigli M, Brun F, Collesi C, Giacca M, Zacchigna S, Severini GM, Lenarduzzi S, S Spedicati B, Santin A, Girotto G, Gasparini P, Taylor MRG, Mestroni L, Merlo M, Sinagra G, Dal Ferro M. Genetic and phenotypic characterization of Nexilin (NEXN) related Cardiomyopathy: results from a multicentric study. JACC Heart Fail. 2025 Sep;13(9):102529. doi: 10.1016/j.jchf.2025.102529. Epub 2025 Jul 18. PMID: 40680702
- Bussani R, Porcari A, Pinamonti M, Iacobucci A, Belladonna E, Tomasini A, Zanconati F, Collesi C, Giacca M, Berlot G, Sinagra G, Silvestri F. Lung damage in SARS-CoV-2 patients: An autopsy study in the era of vaccination. Eur J Clin Invest. 2025 Jan;55(1):e14325. doi: 10.1111/eci.14325. Epub 2024 Sep 29. PMID: 39344023
- Bassetto G, Merlo M, Dal Ferro M, Setti M, Paldino A, Collesi C, Artioli R, Loffredo F, D'Elia S, Golino P, Fabris E, Bussani R, Metra M, Limongelli G, Sinagra G. Apoptosis, a useful marker in the management of hot-phase cardiomyopathy? Eur J Heart Fail. 2024 Feb 27. doi: 10.1002/ejhf.3173. PMID: 38414301
- Ciucci G., Rahhal K., Cimmino G., Natale F., Golino P., Sinagra G., Collesi C. and Loffredo F.S. Engineered heart tissue maturation inhibits cardiomyocyte proliferative response to cryoinjury. Journal of Tissue Engineering, 14: 1-13, 2023
- Catapano D, Tontodonato M, D'Elia S, Pezzullo E, Ciamarella F, Vettori S, Bussani R, Ciucci G, Collesi C, Sinagra G, Golino P, Loffredo FS. Fulminant Myocarditis Unmasking Adult-Onset Still's Disease and Desmoplakin Truncation. Circ Cardiovasc Imaging. 2023 Aug;16(8):e015001.
- Bussani R, Zentilin L, Correa R, Colliva A, Silvestri F, Zacchigna S, Collesi C, Giacca M. Persistent SARS-CoV-2 infection in patients seemingly recovered from COVID-19. J Pathol. 2023 Mar;259(3):254-263.
- Massimo M, Barelli C, Moreno C, Collesi C, Holloway RK, Crespo B, Zentilin L, Williams A, Miron VE, Giacca M, Long KR. Haemorrhage of human foetal cortex associated with SARS-CoV-2 infection. Brain. 2023 Mar 1;146(3):1175-1185.
- Dal Ferro M., Bussani R., Pallino A., Nuzzi V., Collesi C., Zentilin L., Schneider E., Correa R., Silvestri F., Zacchigna S., Giacca M., Metra M., Merlo M., Sinagra G. SARS-CoV-2, myocardial injury and inflammation: insights from a large clinical and autopsy study. Clin Res Cardiol. 2021 Jul 19:1-10.
- Braga L., Ali H., Secco I., Chiavacci E., Neves G., Goldhill D., Penn R., Jimenez-Guardeño J.M., Ortega-Prieto A.M., Bussani R., Cannata A., Rizzari G., Collesi C., Schneider E., Arosio D., Shah A.M., Barclay W.S., Malim M.H., Burrone J., Giacca M. Drugs that inhibit TMEM16 proteins block SARS-CoV-2 spike-induced syncytia. Nature. 2021 Jun;594(7861):88-93.

- Bussani R., Schneider E., Zentilin L., Collesi C., Ali H., Braga L., Volpe M.C., Colliva A., Zanconati F., Berlot G., Silvestri F., Zacchigna S., Giacca M. Persistence of viral RNA, pneumocyte syncytia and thrombosis are hallmarks of advanced COVID-19 pathology. *EBioMedicine*. 2020 Nov; 61:103104.
- Torrini C., Cubero R.J., Dirx E., Braga L., Ali H., Prosdocimo G., Gutierrez M.I., Collesi C., Licastro D., Zentilin L., Mano M., Zacchigna S., Vendruscolo M., Marsili M., Samal A., Giacca M. Common Regulatory Pathways Mediate Activity of MicroRNAs Inducing Cardiomyocyte Proliferation. *Cell Rep*. 2019 May 28;27(9):2759-2771
- Gabisonia K., Prosdocimo G., Aquaro G.D., Carlucci L., Zentilin L., Secco I., Ali H., Braga L., Gorgodze N., Bernini F., Burchielli S., Collesi C., Zandonà L., Sinagra G., Piacenti M., Zacchigna S., Bussani R., Recchia F.A., Giacca M. MicroRNA therapy stimulates uncontrolled cardiac repair after myocardial infarction in pigs. *Nature*. 2019 May; 569 (7756): 418- 422.
- Rehman M., Vodret S., Braga L., Guarnaccia C., Celsi F., Rossetti G., Martinelli V., Battini T., Long C., Vukusic K., Kocjan T., Collesi C., Ring N., Skoko N., Giacca M., Del Sal G., Confalonieri M., Raspa M., Marcello A., Myers M.P., Crovella S., Carloni P., Zacchigna S. High-throughput screening discovers antifibrotic properties of haloperidol by hindering myofibroblast activation. *JCI Insight*. 2019 Apr 18;4(8).
- Ali H., Mano M., Braga L., Naseem A., Marini B., Vu D.M., Collesi C., Meroni G., Lusic M., Giacca M. Cellular TRIM33 restrains HIV-1 infection by targeting viral integrase for proteasomal degradation. *Nat Commun*. 2019 Feb 25;10(1):926.
- Di Stazio M.; Collesi, C.*; Vozzi D.; Morgan A.; Liu W.; Myers M.; Rubinato E.; Giroto G.; D'Adamo P.; Giacca M.; Gasparini P. TBL1Y: a new gene involved in syndromic hearing loss. *Eur J Hum Genet*. 2019 Mar;27(3):466-474.
- Secco I., Barile L., Torrini C., Zentilin L., Vassalli G., Giacca M., Collesi, C. Notch pathway activation enhances cardiosphere in vitro expansion. *J Cell Mol Med*. 2018 Nov;22(11):5583-5595.
- Collesi, C.*; Felician G., Secco I., Gutierrez M.I., Martelletti E., Ali H., Zentilin L., Myers M., Giacca M. Reversible Notch1 acetylation tunes proliferative signaling in cardiomyocytes. *Cardiovascular Res*. 2018, 114, 103-122 (*co-corresponding author)
- Piccolo P., Attanasio S., Secco I., Sangermano R., Strisciuglio C., Limongelli G., Miele E., Mutarelli M., Banfi S., Nigro V., Pons T., Valencia A., Zentilin L., Campione S., Nardone G., Lynnes T.C., Celestino-Soper P.B., Spoonamore K.G., D'Armiento F.P., Giacca M., Staiano A., Vatta M., Collesi, C., Brunetti-Pierri N. MIB2 variants altering NOTCH signalling result in left ventricle hypertrabeculation/non-compaction and are associated with Ménétrier-like gastropathy. *Hum Mol Genet*. 2016 Dec 23.
- Collesi, C. *, Giacca M. Gene transfer to promote cardiac regeneration. *Crit Rev Clin Lab Sci*. 2016 Apr 14:1-24. (*co-corresponding author)
- Gregorini M., Bosio F., Rocca C., Corradetti V., Valsania T., Pattonieri E.F., Esposito P., Bedino G., Collesi, C., Libetta C., Frassoni F., Dal Canton A., Rampino T. Mesenchymal Stromal Cells reset the Scatter Factor system and Cytokine network in experimental kidney transplantation. *BMC Immunol*. 2014 Oct 3; 15:44.
- Felician G., Collesi, C.*; Lusic M., Martinelli V., Dal Ferro M., Zentilin L., Zacchigna S. and Giacca M. Epigenetic modification at Notch responsive promoters blunts efficacy of inducing Notch pathway reactivation after myocardial infarction. *Circ Res*. 2014;115(7):636-49 (*co-corresponding author).
- Milosevic I., Giovedi S., Lou X., Raimondi A., Collesi, C., Shen H., Paradise S., O'Toole E., Ferguson S., Cremona O., De Camilli P. Recruitment of endophilin to clathrin-coated pit necks is required for efficient vesicle uncoating after fission. *Neuron* 2011 Nov 17;72(4):587-601
- Zentilin L., Puligadda U., Lionetti V., Zacchigna S., Collesi, C., Pattarini L., Ruozi G., Camporesi S., Sinagra G., Pepe M., Recchia F.A., Giacca M. Cardiomyocyte VEGFR-1 activation by VEGF-B induces compensatory hypertrophy and preserves cardiac function after myocardial infarction. *FASEB J*. 2010 May; 24(5): 1467-78.
- Chen H., Ko G., Zatti A., Di Giacomo G., Liu L., Raiteri E., Perucco E., Collesi, C., Min W., Zeiss C., De Camilli P., Cremona O. Embryonic arrest at midgestation and disruption of Notch signaling produced by the absence of both epsin 1 and epsin 2 in mice. *Proc Natl Acad Sci U S A*. 2009 Aug 18; 106(33): 13838-43.
- Collesi, C., Zentilin L., Sinagra G.F., Giacca, M. Notch1 signaling stimulates proliferation of immature cardiomyocytes. *J Cell Biol*. 2008 October 6; 183(1): 117-128.
- Hayashi, M., Raimondi, A., O'Toole, E., Paradise, S., Collesi, C., Cremona, O., Ferguson, S.M. and De Camilli, P. Cell and stimulus dependent heterogeneity of synaptic vesicle endocytic recycling revealed by studies of dynamin 1-null neurons. *Proc Natl Acad Sci U S A*. 2008 Feb 12; 105(6):2175-80. Epub 2008 Feb 4.
- Manasser B, Cuccia G, Moimas S, D'Alcontres FS, Polito F, Bitto A, Altavilla D, Squadrìto F, Geuna S, Pattarini L, Zentilin L, Collesi, C., Puligadda U, Giacca M, Colonna MR. Microsurgical arterovenous loops and biological templates: a novel in vivo chamber for tissue engineering. *Microsurgery*. 2007; 27(7): 623-9.
- Ferguson S.M., Brasnjo G., Hayashi, M., Wölfel, M., Collesi, C., Giovedi, S., Raimondi, A., Gong, L.W., Ariel, P., Paradise, S., O'Toole, E., Flavell, R., Cremona, O., Miesenböck, G., Ryan, T.A., De Camilli, P. A selective activity-dependent requirement for dynamin 1 in synaptic vesicle endocytosis. *Science*. 2007 Apr 27; 316 (5824):570-4.
- Gianinazzi, C.F., Raiteri, E., Collesi C., Benfenati, F, Cremona, O Dynamics of secretion. *Archives Italiennes de Biologie*, 2005; 143 (2), pp. 133-142
- Cremona, O., Collesi C., Raiteri, E., Benfenati, F. Kinetics of neuronal and endocrine secretion. *J Endocrinol Invest*. 2004; 27 Suppl(6):128-33.
- Cremona, O., Collesi C., Raiteri, E. Protein Ubiquitylation and Synaptic Function. *Ann N Y Acad Sci*. 2003 Sep; 998:33-40. Review.
- Rampino, T., Gregorini, M., Soccio, G., Maggio, M., Rosso, R., Malvezzi, P., Collesi, C., and Dal Canton, A. The Ron proto-oncogene product is a specific phenotypic marker of renal oncocytoma. *American Journal of Surgical Pathology*, 2003 Jun;27(6):779-85
- Rampino T., Collesi C., Guallini P., Maggio, M., Gregorini M., Soccio, G., and Dal Canton A. Macrophage Stimulating Protein is released by renal tubular cells and activates glomerular mesangial cells. *Journal of the American Society of Nephrology*, March, 2002; 13 (3): 649-57.
- Santoro M. M., Collesi, C., Grisendi S., Gaudino G. and Comoglio P.M. Constitutive activation of the RON gene promotes invasive growth, but not transformation. *Molecular and Cellular Biology*, 16, pp. 7072-7083, 1996.
- Collesi, C., Santoro, M., Gaudino, G., and Comoglio, P.M. A splicing variant of the RON transcript induces constitutive tyrosine kinase activity and invasive phenotype. *Molecular and Cellular Biology*;16(10):5518-26, 1996.
- Gaudino, G., Follenzi, A., Naldini, L., Collesi, C., Santoro, M., Gallo, K.A., Godowski, P.J., and Comoglio, P.M. RON is a heterodimeric tyrosine kinase receptor activated by the HGF homologue MSP. *EMBO Journal*, 13, pp. 3524-3532, 1994.

