

Leonardo Elia, PhD

Work Address: University of Brescia, Department of Molecular and Translational Medicine, Viale Europa 11, Brescia (Italy)
Nationality: Italian
E-Mail: leonardo.elia@unibs.it
LinkedIn: <https://www.linkedin.com/profile/view?id=15874972>
Google Scholar ID <https://scholar.google.com/citations?user=6b13PhMAAAAJ&hl=en>
Scopus Author ID 23982057100

WORK EXPERIENCE

University of Brescia, Italy, 2017-present

Associate professor in Molecular Biology (BIO-11)

- Tenure track position. Teaching responsibilities; Under-graduated programs: Biotechnology, Medical Biotechnology and Biomedical Laboratory Technicians; Graduated programs: Schools of specialization in Pharmacology, Biochemistry and Molecular Pathology, and PhD programs in Molecular Genetics and Precision Medicine.

Humanitas Research Hospital, Milan, Italy, 2015-present

Junior Principal Investigator

- Performing research involving the study of epigenetics in cardiovascular disease development. This includes studies aimed to identify new molecular mechanisms involved in the pathogenesis of heart failure (Both with preserved and not-preserved ejection fraction), atherosclerosis, aneurysm and stenosis, but also cardiovascular complications associated with diabetes.

National Research Council (IRGB-Milan unit), Italy, from August 2015-present

Senior associated researcher

Humanitas University, from April 2016 to December 2016

Senior associated researcher

Multimedica, Milan, Italy, 2011-2014

Research fellow - Marie Curie fellow

- Role of microRNAs in cardiovascular diseases.

University of California, San Diego, 2006-2011

Postdoctoral fellow

- During my post-doctoral work, I have been involved in researches concerning the role of non-coding RNAs in atherosclerosis and heart failure development. Supervisor: Prof. Gianluigi Condorelli.

IRBM, Merck & Co Inc. (Italy), 2002-2006

PhD Student

- Elucidation of mechanisms responsible for cancer immunotolerance in rhesus monkeys and mice in the laboratory of Drs. Fabio Palombo and Nicola La Monica.

EDUCATION

Ph.D in Biochemistry and Molecular Biology, IRBM (Merck & Co., Inc.) and University of Rome "Tor Vergata" (Italy), 2006

Dissertation: "Impact of the regulatory T CD4⁺/CD25⁺ cells inactivation in cancer vaccination protocols."

BS, Pharmaceutical Biotechnology, University of Bologna (Italy), 2001

Graduated *cum laude*, GPA of 110/110

AWARDS and HONORS

- Invited speaker – XXI Congresso Nazionale SIRC – Imola (Italy) – November 2017
- Invited speaker – American Heart Association congress – Orlando (USA) – November 2015
- Invited speaker – European Society of Cardiology congress – London (UK) – August 2015
- Invited speaker – European Atherosclerosis Society congress – Glasgow (UK) – March 2015
- Invited speaker – V International ACS Crossroads – Baveno (Italy) – October 2014
- Invited speaker – Congresso Congiunto dei Gruppi di Studio di Patogenesi dell'Aterosclerosi e della Trombosi – Vittoria (Italy) – September 2014
- Invited speaker – Angiogenesis meeting – Pontignano (Italy) – May 2013.
- Invited speaker – ESC Myocardial Function & Cellular Biology of the Heart Annual Meeting, Varenna (Italy) – April 2011.
- Invited speaker – International Vascular Biology Meeting, Los Angeles (California) – June 2010.
- Keystone meeting, Cardiovascular Development and Repair – Travel Award 2010.
- Postdoctoral fellowship from Italian Ministry of Health.
- Bonus from Merck & Co., Inc.
- 5 year studentship from University of Bologna (Italy)

Academic recognition:

- Italian Associate Professorship Habilitation in: Molecular Biology (05/02; from 24/03/2015 to 24/03/2021); Applied Biology (05/F1; from 04/04/017 to 04/04/2023); General and Clinical Pathology (06/A2; from 28/03/017 to 28/03/2023); Professional and Medical Profession (06/N1, from 27/03/2018 to 27/03/2024).

FUNDING TRACK RECORD

- H2020-FETOPEN-2018-2020 - Novel ideas for radically new technologies, call 2018 (ID#: SEP-210516477). (4 years grant – Unit Coordinator)
- PRIN, call 2017 (ID#: 2017HTKLRF). (3 years grant – Unit Coordinator)
- Young Researcher grant from Italian Ministry of Health, call 2016 (ID#: GR-2016-02364133). (3 years grant – Principal Investigator)
- Fondazione Veronesi grant, call 2015 (1 year grant – Principal Investigator)
- Young Researcher grant from Italian Ministry of Health, call 2013 (ID#: GR2013_02355011). (3 years grant – Unit Coordinator)
- Young Researcher grant from Italian Ministry of Health, call 2010 (ID#: GR2010_2302354). (3 years grant – Principal Investigator)

- Marie Curie Reintegration Grant, call 2011 (ID#: PIRG08-GA-2010-276993). (4 years grant – Principal Investigator)

INVITED REVIEWER

- **GRANT APPLICATIONS:** The Austrian Science Fund, European Research Council (Advanced grant).
- **JOURNALS:** Circulation Research, Cardiovascular Research, FESB Letter, Plos One, Vascular Pharmacology, Journal of Molecular and Cellular Cardiology.

LANGUAGES

- Italian: mother tongue
- English: fluent

COMPUTER SKILLS

- Advanced knowledge of Microsoft ® Windows and Mac environments, and Office package (Word, Excel, Access, PowerPoint and Outlook).
- Statistical Programs: Advanced knowledge of Prism.
- Advanced knowledge of genome datasets: Ensemble, NCBI, UCSC, Targetscan, etc

LIST OF PUBLICATIONS

Number of publications cited by PubMed with IF	25
Total IF	152
H-index - Google Scholar	17
Number of citations - Google Scholar	3345

1. **Elia L[#]** and Condorelli G[#]. “The involvement of epigenetics in vascular disease development”. **The International Journal of Biochemistry & Cell Biology**; Int J Biochem Cell Biol. 2019 Feb;107:27-31. doi: 10.1016/j.biocel.2018.12.005. Epub 2018 Dec 10. **#Corresponding authors**
2. Hall F, Quintavalle M, Climent M, Kunderfranco P, Condorelli G, and **Elia L[#]**. “Circ_Lrp6, a circular RNA enriched in smooth muscle cells, acts as a sponge regulating miRNA-145 function”. *Circulation Research*; 2019 Feb 15;124(4):498-510. doi: 10.1161/CIRCRESAHA.118.314240. **#Corresponding author**
3. **Elia L**, Kunderfranco P, Carullo P, Vacchiano M, Farina FM, Hall IF, Mantero S, Panico C, Papait R, Condorelli G, Quintavalle M. “UHRF1 epigenetically orchestrates smooth muscle cell plasticity in arterial disease”. **Journal of Clinical Investigation**; Epub ahead of print, Mar 20 2018. DOI: 10.1172/JCI96121
4. Farina F, Inguscio A, Kunderfranco P, Cortesi A, **Elia L[#]**, Quintavalle M[#]. “MicroRNA-26a/ Cyclin-dependent kinase 5 axis controls proliferation, apoptosis and in vivo tumor growth of Diffuse large B-cell lymphoma”. *Cell Death and Disease*. 2017, doi:10.1038/cddis.2017.291. **#Corresponding authors**
5. **Elia L[#]** and Quintavalle M[#]. “Epigenetics and vascular diseases: influence of non-coding RNAs and their clinical implications”. **Frontier in Cardiovascular Medicine**. DOI: 10.3389/fcvm. 2017.00026. **2017; 4: 26. #Corresponding authors**

6. Arosio P, **Elia L**, Poli M. “Ferritin, cellular iron storage and regulation”. *IUBMB Life*; 2017 Mar 27. DOI:10.1002/iub.1621.
7. Kallikourdis M, Martini E, Carullo P, Sardi C, Greco C, Kunderfranco P, Stirparo G, Rusconi R, Ormbostad AM, Faggian G, Pasquale E, **Elia L**, Rumio C, Catalucci D, Papait R and Condorelli C. “T cell costimulation blockade blunts pressure overload-induced heart failure”. *Nature Communication*; 2017 Mar 6;8:14680. doi: 10.1038/ncomms14680
8. **Elia L**[#], Quintavalle M and Condorelli G. “Circular RNAs and heart failure: new players for an old disease.” *Cardiovascular Research*; 2017 Feb 1. doi: 10.1093/cvr/cvx007. [Epub ahead of print]. **# Corresponding author**
9. **Elia L**[#] and Condorelli G. “MicroRNAs and pulmonary hypertension: a tight link”. *Cardiovascular Research*; DOI: <http://dx.doi.org/10.1093/cvr/cvw163> cvw163 First published online: 19 June 2016. **# Corresponding author**
10. **Elia L**[#] and Condorelli G. “RNA (Epi)genetics in Cardiovascular Diseases”. *Journal of Molecular and Cellular Cardiology*; 2015 Jul 20. pii: S0022-2828(15)30016-X. doi: 10.1016/j.yjmcc.2015.07.012. [Epub ahead of print]. **#Corresponding author**
11. Climent M, Quintavalle M, Miragoli M, Chen J, Condorelli G and **Elia L**[#]. “TGFβ triggers miR-143/145 transfer from smooth muscle cells to endothelial cells, thereby modulating vessel stabilization”. *Circulation Research* 2015; first published on March 23 2015 as doi:10.1161/CIRCRESAHA.116.305178. **#Corresponding author**
12. Sala F, Aranda JF, Rotllán N, Ramirez CM, **Elia L**, Condorelli G, Fernandez-Hernando C, Catapano AL, Norata GD. “MiR-143/145 deficiency attenuates the progression of atherosclerosis in Ldlr-/-mice”. *Thrombosis and Haemostasis*. 2014 Oct;112(4):796-802. doi: 10.1160/TH13-11-0905. Epub 2014 Jul 10.
13. Castaldi A, Zaglia T, Di Mauro V, Carullo P, Viggiani G, Borile G, Di Stefano B, Schiattarella G, Giovanna Gualazzi M, **Elia L**, Stirparo G, Pironti G, Kunderfranco P, Todaro M, Esposito G, Bang ML, Mongillo M, Condorelli G and Catalucci D. “MiR-133 modulates the β1Adrenergic Receptor transduction cascade”. *Circulation Research*. 2014, Jul 7;115(2):273-83. doi: 10.1161/CIRCRESAHA.115.303252. Epub 2014 May 7.
14. Norata GD, Pinna C, Zappella F, **Elia L**, Sala A, Condorelli G, Catapano A. “MicroRNA 143-145 deficiency impairs vascular function”. *Int J Immunopathol Pharmacol*, 2012 Apr-Jun;25(2):467-8.
15. Quintavalle M, Condorelli G, **Elia L**[#]. “Arterial remodeling and atherosclerosis: miRNAs involvement”. *Vascular Pharmacology*, Oct;55(4):106-10. doi: 10.1016/j.vph.2011.08.216. Epub 2011 Aug 16. **#Corresponding author**
16. Quintavalle M, **Elia L**, Susan Heynen, Courtneidge SA. “A cell-based, high content screening assay reveals activators and inhibitors of cancer cell invasion”. *Science Signaling*, 2011 Jul 26;4(183):ra49.
17. Quintavalle M*, **Elia L***, Condorelli G, Courtneidge SA. “MicroRNA control of podosome formation in vascular smooth muscle cells in vivo and in vitro”. *Journal of Cell Biology*. 2010 189(1):13-22. ***Equal contribution**
18. **Elia L**, Contu R, Quintavalle M, Varrone F, Chimenti C, Russo MA, Cimino V, De Marinis L, Frustaci A, Catalucci D, Condorelli G. “Reciprocal regulation of microRNA-1 and insulin-like growth factor-1 signal transduction cascade in cardiac and skeletal muscle in physiological and pathological conditions.” *Circulation*. 2009 120:2377-85.
19. **Elia L**, Quintavalle M, Zhang J, Contu R, Cossu L, Latronico MV, Peterson KL, Indolfi C, Catalucci D, Chen J, Courtneidge SA, Condorelli G. “The knockout of miR-143 and -145

- alters smooth muscle cell maintenance and vascular homeostasis in mice: correlates with human disease.” *Cell Death Differ.* 2009 Dec;16(12):1590-8. doi: 10.1038/cdd.2009.153. Epub 2009 Oct 9.
20. Latronico MV, **Elia L**, Condorelli G, Catalucci D. “Heart failure: Targeting transcriptional and post-transcriptional control mechanisms of hypertrophy for treatment”. *Int J Biochem Cell Biol.* 2008 40:1643-8.
 21. Facciabene A, Aurisicchio L, Leonardo **Elia L**, Palombo F, Mennuni C, Ciliberto G, La Monica N. “Vectors encoding Carcinoembryonic antigen fused to the B subunit of heat labile enterotoxin elicit antigen-specific immune responses and antitumor effects”. *Vaccine.* 2007 26:47-58.
 22. Carè A, Catalucci D, Felicetti F, Bonci D, Addario A, Gallo P, Bang ML, Segnalini P, Gu Y, Dalton ND, **Elia L**, Latronico MV, Høydal M, Autore C, Russo MA, Dorn GW 2nd, Ellingsen O, Ruiz-Lozano P, Peterson KL, Croce CM, Peschle C, Condorelli G. “MicroRNA-133 controls cardiac hypertrophy”. *Nature Medicine.* 2007 May;13(5):613-8. Epub 2007 Apr 29.
 23. **Elia L**, Aurisicchio L, Facciabene A, Giannetti P, Ciliberto G, La Monica N And Palombo F. “CD4+CD25+ regulatory T-cell-inactivation in combination with adenovirus vaccines enhances T-cell responses and protects mice from tumor challenge”. *Cancer Gene Therapy.* 2007 Feb;14(2):201-10. Epub 2006 Oct 20
 24. **Elia L**, Mennuni C, Storto M, Podda S, Calvaruso F, Salucci V, Aurisicchio L, Scarito A, Ciliberto G, La Monica N and Palombo F. “Genetic vaccines against Ep-CAM break tolerance to self in a limited subset of subjects: initial identification of predictive biomarkers.” *European Journal of Immunology*, 2006 May;36(5):1337-49.
 25. Facciabene a, Aurisicchio L, **Elia L**, Palombo F, Mennuni C, Ciliberto C and La Monica N. "DNA and Adenovirus vectors encoding CEA fused to immuno-enhancing sequences augment antigen specific immune response and confer tumor protection." *Human Gene Therapy*, 2006 17:81-92.