

EUROPEAN  
CURRICULUM VITAE  
FORMAT



**Personal information**

Name **Luca Maria Munaron**

Address(es) Department of Animal & Human Biology. Via Accademia Albertina 13, 10125, Torino, ITALY

Telephone(s) ++390116704667

E-mail luca.munaron@unito.it

Nationality Italian

Date of birth 13.07.1966

Gender Male

**Work experience**

*2018-present* Full Professor of Physiology (University of Torino).  
*2004-2018* Associate Professor of Physiology (University of Torino).  
*1996-2004* Assistant Professor of Physiology (University of Torino).  
*1994-1995* Fellowship for the Italian Association for Cancer Research (AIRC).

Main activities and responsibilities

**TEACHING**

**Courses:**

Cellular Physiology and Biophysics for the master degree course of Cellular and Molecular Biology (CMB, Univ of Torino)  
Evolutionary Physiology for the master degree course of Evolution of Animal and Human Behavior (ECAU, Univ of Torino)  
Physiology for Sport Science (SUISM, Univ of Torino)  
History of evolutionary theory (Astronave Terra) for Scuola di Studi Superiori Ferdinando Rossi (SSST, Univ of Torino)  
Evolution for Scuola di Studi Superiori Ferdinando Rossi (SSST, Univ of Torino)  
Cellular and Molecular Biophysics for the master degree course of Industrial Biotechnology (Univ of Torino)  
History and Philosophy of Life Sciences for the master of Didactics for Secondary School (SSIS, Univ of Torino)  
General Physiology for the undergraduate courses in Biological Sciences and Natural Sciences (Univ of Torino)  
Didactics on Natural sciences (1998-2007; Faculty of Educational Sciences, Univ of Valle d'Aosta, IT)

*Supervisor* of several master students from different backgrounds (Cell Biology, Biotechnology, Physics).

*Supervisor* of 8 PhD students (PhD Complex Systems for Life Science, University of Torino).

## **INSTITUTIONAL POSITIONS**

2021-present. President of the Joint Teaching Committee for the School of Sciences (Univ of Torino).

2019-2021. Member of the Joint Teaching Committee for the School of Sciences (Univ of Torino).

2020-present. Member of the Committee for Sport Activities of University of Torino.

2018-21 President of the Committee for Public Engagement at the Department of Life Sciences and Systems Biology (Univ of Torino).

2019-21 Co-founder of The Public Engagement Lab (Univ of Torino).

2020-22 Member and sub-coordinator of GEV panel for Life Sciences (ANVUR; VQR 2015-19).

## **RESEARCH ACTIVITY**

### **Bibliometric parameters**

*Author of more than 100 full papers on indexed international journals (Last name/corresponding author of >40 papers).*

#### **Total citations:**

>2900 Scopus

>2800 Web of Science

>4000 Google Scholar

#### **h index:**

35 Scopus

34 Web of Science

39 Google Scholar: included in Top Italian Scientists list for Biomedical Sciences (VIA Academy).

### **Main Scientific Contributions**

He started working on the role and properties of mitogenic calcium signals in fibroblasts. Identification and characterization of the role of store-independent calcium entry in the control of cell proliferation.

He was the first to identify the critical role of arachidonic acid as a key regulator of mitogenic-related calcium signals, providing a detailed biophysical description of the channels involved.

In the 1997 he founded the Laboratory of Cellular and Molecular Angiogenesis (LACM) at the Department of Life Sciences & Systems Biology. Since 2019, LACM is a part of The International Associated Laboratory "CaPANCIInv" (with Lille and Munster Universities).

He provided substantial evidence about the function of voltage-independent calcium signals in the control of endothelial cell proliferation, migration and angiogenesis. In particular, by the use of high-resolution confocal microscopy calcium measurements in living cells, he revealed the existence of proangiogenic calcium microdomains in endothelial cells. He provided a detailed description of the complex intracellular signaling responsible for calcium channel regulation, including arachidonic acid, nitric oxide and the novel gasotransmitter hydrogen sulfide (H<sub>2</sub>S). He was one of the first to suggest a role for TRP channels in endothelial cell proliferation. More recently, he focused part of his research on proangiogenic calcium signals in tumor-derived endothelial cells, providing substantial evidence on the differences between endothelial cells from normal tissues and the tumoral endothelium. The experimental data have been successfully employed to provide mathematical models for the quantitative description and prediction of some key features of neovascularization.

A number of collaborations are ongoing with several industries to integrate basic research with more applied topics, including the role of vascularization in hair growth, bone remodeling and repair and the vascular effects of nutraceuticals in diabetes and metabolic syndrome. Another recent interest is focused on the interaction between biological tissues and nanoparticles.

Current research interests

*Ion channels, calcium signaling and angiogenesis.* Intracellular signaling in tumor-derived endothelial cells, with particular interest for the role of calcium channels  
*Mathematical Modeling.* Biomathematical models for vascularization and angiogenesis  
*Nanobiotech.* Use of functionalized nanotubes for drug delivering against tumor vascularization.  
*Skin vascularization.* In vitro co-culture approaches for testing natural products of dermatological interest.  
*Bone vascularization and biomaterials.* In vitro evaluation of biocompatibility of biomaterials for bone and dental implants.

### **Scientific memberships**

Scientific Board of The Italian Society for Cardiovascular Research (SIRC).  
Scientific Board of Nanostructured Interfaces and Surfaces (NIS) Inter-departmental Centre (Univ of Torino).  
Scientific Board for the Doctoral School in Complex Systems for quantitative biomedicine (Univ of Torino).  
Member of The Italian Physiological Society (SIF).  
Member of the Interdepartmental Centre of Systems Biology (Univ of Torino).  
Member of the Interuniversity Research Centre on Epistemology and History of Life Sciences-Res Viva (Univ of Rome).  
Member of The third way of Evolution Group (<https://www.thethirdwayofevolution.com/>)

### **Editorial and Reviewer activity**

*Editorial Board of international journals*

- Cancers (MDPI). Editorial Board
- Frontiers in Physiology. Associate Editor. Section: Vascular Biology.
- Frontiers in Physiology. Guest Associate Editor. Section: Membrane Physiology and Membrane Biophysics
- Frontiers in Cellular Neuroscience. Review Editor.
- Oncology Research. Editorial Board.
- Recent Patents on Anticancer Drug Discovery (Bentham Science Publishers) Editorial Board-Regional Editor
- Current Medicinal Chemistry (Bentham Science Publishers). Guest Editor for 'Hot Topic Intracellular Calcium Signaling: Holding the Balance between Health and Disease' (2012)
- World Journal of Biological Chemistry (Baishideng Publishing). Editorial Board
- International Journal of Biostatistics & Computational Biology (IJBCB). Editorial Board

*Reviewer for high impact international journals.*

*Reviewer for international agencies (UK, Switzerland, China, United Arab Emirates, Japan).*

*Invited speaker and chairman in national and international meetings, workshops, and seminars.*

### **PROJECTS**

Local Unit Coordinator of the PRIN 2017 Project: Leveraging basic knowledge of ion channel networks in cancer for innovative therapeutic strategies (LIONESS).

Research project of Ateneo- Compagnia di San Paolo 2014: 'TRP channels functionalized nanoparticles to target prostate cancer vascularization' (Participant).

Research project of the University-Compagnia di San Paolo 2011: 'Nanostructured materials and interfaces for frontier technologies' (Participant).

Principal Investigator for the 2007 Alfieri Project (CRT Foundation): 'Role of intracellular calcium in tumour angiogenesis'.

Principal Investigator for the Finalized Health Research Projects of the Piedmont Region (2003, 2006, 2007, 2008, 2009).

Co-Presenter of the CIPE 2004 Project: 'Biocompatible nanostructured materials for biomedical applications'.

### **TECHNOLOGICAL TRANSFER**

**Scientific supervisor for University-Industry agreements** with Rottapharm-Madaus, Monza, ITA, Meda Pharma, Monza, ITA, Twocare, Torino, ITA, Eltek, Alessandria, ITA, Tiss'you, San Marino, Biomec, Lecco, ITA, Abel Nutraceuticals, ITA.

**PUBLICATIONS**

See attached appendix

**Education and training** 1994-1995: Fellowship for the Italian Association for Cancer Research (AIRC).  
1994: Ph.D. in Physiological Sciences (University of Milano).  
1990: Degree in Biological Sciences (University of Torino).

**Personal skills and competences**

Mother tongue(s) **Italian**

Other language(s)

Self-assessment

European level (\*)

**English**

Understanding		Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production	
B2	independent user	B2	independent user	B2	independent user	B2	independent user

(\*) [Common European Framework of Reference for Languages](#)

**Social skills and competences** Good communication skills gained through attendance to numerous working groups, and managing collaborations and networks.

**Organisational skills and competences** Good experience in project and team management as group leader and coordinator of multidisciplinary local, national and international research and teaching programmes

**Technical skills and competences** Cell biology and Biophysics

**Computer skills and competences**  
-High level mac and windows user  
-Good knowledge of Microsoft Office tools (Word, Excel, PowerPoint)  
-Good knowledge of graphic design applications (Adobe Photoshop)

**Artistic skills and competences** Music player (piano, acoustic and electric guitars) and composer



## LUCA MUNARON

### PUBLICATIONS

#### Full papers on ISI Journals

1. Visentin L, Scarpellino G, Chinigò G, **Munaron L** and Ruffinatti FA. BioTEA: Containerized Methods of Analysis for Microarray-Based Transcriptomics Data. *Biology* 2022, 11(9), 1346; doi:10.3390/biology11091346.
2. Lastraioli E, Ruffinatti FA, Bagni G, Visentin L, di Costanzo F, **Munaron L**, Arcangeli A. The Transcriptional Landscape of BRAF Wild Type Metastatic Melanoma: A Pilot Study. *Int J Mol Sci.* 2022 Jun 21;23(13):6898. doi: 10.3390/ijms23136898.
3. Petrillo S, Genova T, Chinigò G, Roato I, Scarpellino G, Kopecka J, Altruda F, Tolosano E, Riganti C, Mussano F, **Munaron L**. Endothelial Cells Promote Osteogenesis by Establishing a Functional and Metabolic Coupling With Human Mesenchymal Stem Cells. *Front Physiol.* 2022 Jan 11;12:813547. doi: 10.3389/fphys.2021.813547.
4. Scarpellino G, Genova T, Quarta E, Distasi C, Dionisi M, Fiorio Pla A, **Munaron L\***. P2X purinergic receptors are multisensory detectors for micro-environmental stimuli that control migration of tumoral endothelium. *Cancers (Basel).* 2022 May 31;14(11):2743. doi: 10.3390/cancers14112743.
5. Scarpellino G, **Munaron L**, Cantelmo AR, Fiorio Pla A. Calcium-Permeable Channels in Tumor Vascularization: Peculiar Sensors of Microenvironmental Chemical and Physical Cues. *Rev Physiol Biochem Pharmacol.* 2022;182:111-137. doi: 10.1007/112\_2020\_32.
6. Petrillo S, De Giorgio F, Kopecka J, Genova T, Fiorito V, Allocco AL, Bertino F, Chiabrando D, Mussano F, Altruda F, **Munaron L**, Riganti C, Tolosano E. Endothelial Heme Dynamics Drive Cancer Cell Metabolism by Shaping the Tumor Microenvironment. *Biomedicines.* 2021 Oct 28;9(11):1557. doi: 10.3390/biomedicines9111557.
7. Roato I, Chinigò G, Genova T, **Munaron L**, Mussano F. Oral Cavity as a Source of Mesenchymal Stem Cells Useful for Regenerative Medicine in Dentistry. *Biomedicines.* 2021 Aug 25;9(9):1085. doi: 10.3390/biomedicines9091085.
8. Mannino G, Iovino P, Lauria A, Genova T, Asteggiano A, Notarbartolo M, Porcu A, Serio G, Chinigò G, Occhipinti A, Capuzzo A, Medana C, **Munaron L** and Gentile C. Bioactive Triterpenes of Protium heptaphyllum Gum Resin Extract Display Cholesterol-Lowering Potential. *Int. J. Mol. Sci.* 2021, 22, 2664. doi.org/10.3390/ijms22052664.
9. Mannino G, Chinigò G, Serio G, Genova T, Gentile C, **Munaron L**, Bertea CM. Proanthocyanidins and Where to Find Them: A Meta-Analytic Approach to Investigate Their Chemistry, Biosynthesis, Distribution, and Effect on Human Health. *Antioxidants (Basel).* 2021 Jul 30;10(8):1229. doi: 10.3390/antiox10081229.
10. Petrillo S, Cantelmo AR, Genova T, **Munaron L**. Editorial: Mechanisms of Vessel Development: From a Primitive Draft to a Mature Vasculature. *Front Physiol.* 2021 Jul 16;12:725531. doi: 10.3389/fphys.2021.725531. eCollection 2021.
11. Lionetti V, Bollini S, Coppini R, Gerbino A, Ghigo A, Iaccarino G, Madonna R, Mangiacapra F, Miragoli M, Moccia F, **Munaron L**, Pagliaro P, Parenti A, Pasqua T, Penna C, Quaini F, Rocca C, Samaja M, Sartiani L, Soda T, Tocchetti CG, Angelone T. Understanding the Heart-Brain Axis Response in COVID-19 patients: a Suggestive Perspective for Therapeutic Development. *Pharmacol Res* 2021 Mar 26;105581. doi: 10.1016/j.phrs.2021.105581.
12. Genova T, Cavagnetto D, Tasinato F, Petrillo S, Ruffinatti FA, Mela L, Carossa M, **Munaron L**, Roato I and Mussano F. Isolation and Characterization of Buccal Fat Pad and Dental Pulp MSCs from the Same Donor. *Biomedicines* 2021, 9(3), 265; doi.org/10.3390/biomedicines9030265.

13. Lastraioli E, Ruffinatti FA, Di Costanzo F, Sala C, **Munaron L**, Arcangeli A. A Transcriptomic Approach Reveals Selective Ribosomal Remodelling in the Tumour Versus the Stromal Compartment of Metastatic Colorectal Cancer. *Cancers (Basel)*. 2021 Aug 20;13(16):4188. doi: 10.3390/cancers13164188.
14. Ruffinatti FA, Genova T, Mussano F, **Munaron L**.\* MORPHEUS: An automated tool for unbiased and reproducible cell morphometry. *J Cell Physiol*. 2020 Dec;235(12):10110-10115. doi: 10.1002/jcp.29768.
15. Genova T, Gaglioti D, **Munaron L**. Regulation of Vessel Permeability by TRP Channels. *Front Physiol*. 2020 May 5; 11:421. doi: 10.3389/fphys.2020.00421. eCollection 2020.
16. Moccia F, Gerbino A, Lionetti V, Miragoli M, **Munaron LM**, Pagliaro P, Pasqua T, Penna C, Rocca C, Samaja M, Angelone T. COVID-19-associated cardiovascular morbidity in older adults: a position paper from the Italian Society of Cardiovascular Research. *Geroscience*. 2020 May 20. doi: 10.1007/s11357-020-00198-w.
17. Bassino E, Gasparri F, **Munaron L**. Protective Role of Nutritional Plants Containing Flavonoids in Hair Follicle Disruption: A Review. *Int J Mol Sci*. 2020 Jan 14;21(2). pii: E523. doi: 10.3390/ijms21020523. Review.
18. Mussano F, Genova T, Laurenti M, Gaglioti D, Scarpellino G, Rivolo P, Faga MG, Fiorio Pla A, **Munaron L**, Mandracci P, Carossa S. Beta1-integrin and TRPV4 are involved in osteoblast adhesion to different titanium surface topographies. *Appl Surf Sci*. 2020; 507: 145112. doi: 10.1016/j.apsusc.2019.145112.
19. Brossa A, Buono L, Fallo S, Fiorio Pla A, **Munaron L**, Bussolati B. Alternative Strategies to Inhibit Tumor Vascularization. *Int J Mol Sci*. 2019 Dec 7;20(24). pii: E6180. doi: 10.3390/ijms20246180. Review.
20. Genova T, Petrillo S, Zicola E, Roato I, Ferracini R, Tolosano E, Altruda F, Carossa S, Mussano F, **Munaron L**. The Crosstalk Between Osteodifferentiating Stem Cells and Endothelial Cells Promotes Angiogenesis and Bone Formation. *Front Physiol*. 2019 Oct 14;10:1291. doi: 10.3389/fphys.2019.01291. eCollection 2019.
21. Bernardini M, Brossa A, Chinigo G, Grolez GP, Trimaglio G, Allart L, Hulot A, Marot G, Genova T, Joshi A, Mattot V, Fromont G, **Munaron L**, Bussolati B, Prevarskaya N, Fiorio Pla A, Gkika D. Transient Receptor Potential Channel Expression Signatures in Tumor-Derived Endothelial Cells: Functional Roles in Prostate Cancer Angiogenesis. *Cancers (Basel)*. 2019 Jul 8;11(7). pii: E956. doi: 10.3390/cancers11070956.
22. Scarpellino G, Genova T, Avanzato D, Bernardini M, Bianco S, Petrillo S, Tolosano E, de Almeida Vieira JR, Bussolati B, Fiorio Pla A, **Munaron L**\*. Purinergic Calcium Signals in Tumor-Derived Endothelium. *Cancers (Basel)*. 2019 Jun 1;11(6). pii: E766. doi: 10.3390/cancers11060766.
23. Bassino E, Gasparri F, **Munaron L**. Natural dietary antioxidants containing flavonoids modulate keratinocytes physiology: In vitro tri-culture models. *J Ethnopharmacol*. 2019 Mar 30; 238:111844.
24. Distasi C, Dionisi M, Ruffinatti FA, Gilardino A, Bardini R, Antoniotti S, Catalano F, Bassino E, **Munaron L**, Martra G & Lovisolo D. The interaction of SiO<sub>2</sub> nanoparticles with the neuronal cell membrane: activation of ionic channels and calcium influx. *Nanomedicine*. 2019 Mar;14(5):575-594.
25. Scarpellino G, Genova T, **Munaron L**\*. Purinergic P2X7 Receptor: A Cation Channel Sensitive to Tumor Microenvironment. *Recent Pat Anticancer Drug Discov*. 2019;14(1):32-38.
26. Bassino E, Gasparri F, **Munaron L**. *Serenoa repens* and N-acetyl glucosamine/milk proteins complex differentially affect the paracrine communication between endothelial and follicle dermal papilla cells. *J Cell Physiol*. 2019 May;234(5):7320-7329.
27. Lugini A, Di Nardo G, **Munaron L**, Gilardi G, Fiorio Pla A, Gribaudo G. Human cytomegalovirus US21 protein is a viroporin that modulates calcium homeostasis and protects cells against apoptosis. *Proc Natl Acad Sci U S A*. 2018 Dec 26;115(52): E12370-E12377.
28. Petrillo S, Tolosano E, **Munaron L**, Genova T. Targeting Metabolism to Counteract Tumor Angiogenesis: A Review of Patent Literature. *Recent Pat Anticancer Drug Discov*. 2018;13(4):422-427.

29. Mussano F, Genova T, Laurenti M, Zicola E, **Munaron L**, Rivolo P, Mandracci P, Carossa S. Early Response of Fibroblasts and Epithelial Cells to Pink-Shaded Anodized Dental Implant Abutments: An In Vitro Study. *Int J Oral Maxillofac Implants*. 2018 May/Jun;33(3):571-579.
30. Mussano F, Genova T, Petrillo S, Roato I, Ferracini R, **Munaron L**. Osteogenic Differentiation Modulates the Cytokine, Chemokine, and Growth Factor Profile of ASCs and SHED. *Int J Mol Sci*. 2018 May 14;19(5).
31. Distasi C, Ruffinatti FA, Dionisi M, Antoniotti S, Gilardino A, Croci G, Riva B, Bassino E, Alberto G, Castroflorio E, Incarnato D, Morandi E, Martra G, Oliviero S, **Munaron L**, Lovisolo D. SiO<sub>2</sub> nanoparticles modulate the electrical activity of neuroendocrine cells without exerting genomic effects. *Sci Rep*. 2018 Feb 9;8(1):2760.
32. Bassino E, Gasparri F, **Munaron L\***. Pleiotropic effects of white willow bark and 1,2 decanediol on human adult keratinocytes. *Skin Pharmacol Physiol*. 2018 Nov 8;31(1):10-18.
33. Mussano F, Genova T, Laurenti M, **Munaron L**, Pirri CF, Rivolo P, Carossa S, Mandracci P. Hydrogenated amorphous silicon coatings may modulate gingival cell response. *Appl Surf Sci* 2018; 436:603-612.
34. Mussano F, Genova T, Serra FG, Carossa M, **Munaron L**, Carossa S. Nano-Pore Size of Alumina Affects Osteoblastic Response. *Int J Mol Sci*. 2018 Feb 9;19(2).
35. Petrillo S, Chiabrando D, Genova T, Fiorito V, Ingoglia G, Vinchi F, Mussano F, Carossa S, Silengo L, Altruda F, Merlo GR, **Munaron L**, Tolosano E. Heme Accumulation in Endothelial Cells Impairs Angiogenesis by Triggering Paraptosis. *Cell Death Differ*. 2018; 25:573–588.
36. Bianco S, Mancardi D, Merlino A, Bussolati B, **Munaron L\***. Hypoxia and hydrogen sulfide differentially affect normal and tumor-derived vascular endothelium. *Redox Biol*. 2017; 12:499-504.
37. Genova T, Grolez GP, Camillo C, Bernardini M, Bokhobza A, Richard E, Scianna M, Lemonnier L, Valdembri D, **Munaron L**, Philips MR, Mattot V, Serini G, Prevarskaya N, Gkika D, Fiorio Pla A. TRPM8 inhibits endothelial cell migration via a non-channel function by trapping the small GTPase Rap1. *J Cell Biol*. 2017 Jul 3;216(7):2107-2130.
38. Mussano F, Genova T, Falzacappa E Verga, Scopece P, **Munaron L**, Rivolo P, Mandracci P, Benedetti A, Carossa S, Patelli, A. In vitro characterization of two different atmospheric plasma jet chemical functionalizations of titanium surfaces. *Appl Surf Sci*. 2017; 409:314-324.
39. Scianna M, Bassino E, **Munaron L\***. An Innovative Assay for the Analysis of In Vitro Endothelial Remodeling: Experimental and Computational Evidence. *J Cell Physiol*. 2017 Feb;232(2):243-248.
40. Mussano F, Genova T, Rivolo P, Mandracci P, **Munaron L**, Faga MG, Carossa S. Role of Surface Finishing on the in vitro Biological Properties of a Silicon Nitride-Titanium Nitride (Si<sub>3</sub>N<sub>4</sub>-TiN) Composite. *J Mater Sci* 2017; 52:467–77.
41. Bassino E, Vallariello E, Gasparri F, **Munaron L\***. Dermal-epidermal cross-talk: differential interactions with microvascular endothelial cells. *J Cell Physiol*. 2017 May;232(5):897-903.
42. Scianna M, **Munaron L\***. Computational approaches for translational oncology: concepts and patents. *Recent Pat Anticancer Drug Discov*. 2016;11(4):384-392.
43. Avanzato D, Genova T, Fiorio Pla A, Bernardini M, Bianco S, Bussolati B, Mancardi D, Giraud E, Maione F, Cassoni P, Castellano I, **Munaron L\***. Activation of P2X7 and P2Y11 purinergic receptors inhibits migration and normalizes tumor-derived endothelial cells via cAMP signaling. *Sci Rep*. 2016 Sep 2; 6:32602.
44. Mussano F, Genova T, **Munaron L**, Petrillo S, Erovigni F, Carossa S. Cytokine, chemokine, and growth factor profile of platelet-rich plasma. *Platelets*. 2016 Jul;27(5):467-71.
45. Bassino E, Antoniotti S, Gasparri F, **Munaron L\***. Effects of flavonoid derivatives on human microvascular endothelial cells. *Nat Prod Res*. 2016 Mar 2:1-4.
46. Bassino E, Zanardi A, Gasparri F, **Munaron L\***. Effects of the biomimetic peptide Sh-Polypeptide 9 (CG-VEGF) on cocultures of human hair follicle dermal papilla cells and microvascular endothelial cells. *Exp Dermatol*. 2016 Mar;25(3):237-9.

47. Genova T, **Munaron L**, Carossa S, Mussano F. Overcoming physical constraints in bone engineering: 'the importance of being vascularized'. *J Biomater Appl*. 2016 Feb;30(7):940-51.
48. Scianna M, Bassino E, **Munaron L\***. A cellular Potts model analyzing differentiated cell behavior during in vivo vascularization of a hypoxic tissue. *Comput Biol Med*. 2015 Aug; 63:143-56.
49. Bassino E, Gasparri F, Giannini V, **Munaron L\***. Paracrine crosstalk between human hair follicle dermal papilla cells and microvascular endothelial cells. *Exp Dermatol*. 2015 May;24(5):388-90.
50. **Munaron L\***. Systems biology of ion channels and transporters in tumor angiogenesis: An omics view. *Biochim Biophys Acta*. 2015 Oct;1848(10 Pt B):2647-56.
51. Avanzato D, Merlino A, Porrera S, Wang R, **Munaron L\***, Mancardi D. Role of calcium channels in the protective effect of hydrogen sulfide in rat cardiomyoblasts. *Cell Physiol Biochem*. 2014;33(4):1205-14.
52. Fiorio Pla A, **Munaron L**. Functional properties of ion channels and transporters in tumour vascularization. *Philos Trans R Soc Lond B Biol Sci*. 2014 Feb 3;369(1638):20130103.
53. Moccia F, Tanzi F, **Munaron L**. Endothelial remodelling and intracellular calcium machinery. *Curr Mol Med*. 2014 May;14(4):457-80.
54. Becchetti A, **Munaron L**, Arcangeli A. The role of ion channels and transporters in cell proliferation and cancer. *Front Physiol*. 2013 Oct 29; 4:312.
55. **Munaron L\***. Editorial: Intracellular calcium signaling: holding the balance between health and disease. *Curr Med Chem*. 2012;19(34):5765-7.
56. **Munaron L\***, Scianna M. Multilevel complexity of calcium signaling: Modeling angiogenesis. *World J Biol Chem*. 2012 Jun 26;3(6):121-6.
57. **Munaron L\***, Avanzato D, Moccia F, Mancardi D. Hydrogen sulfide as a regulator of calcium channels. *Cell Calcium*. 2013 Feb;53(2):77-84.
58. **Munaron L\***, Arcangeli A. Editorial: ion fluxes and cancer. *Recent Pat Anticancer Drug Discov*. 2013 Jan 1;8(1):1-3.
59. **Munaron L\***, Genova T, Avanzato D, Antoniotti S, Fiorio Pla A. Targeting calcium channels to block tumor vascularization. *Recent Pat Anticancer Drug Discov*. 2013 Jan 1;8(1):27-37.
60. Pupo E, Pla AF, Avanzato D, Moccia F, Cruz JE, Tanzi F, Merlino A, Mancardi D, **Munaron L\***. Hydrogen sulfide promotes calcium signals and migration in tumor-derived endothelial cells. *Free Radic Biol Med*. 2011 Nov 1;51(9):1765-73.
61. Fiorio Pla A, Avanzato D, **Munaron L**, Ambudkar IS. Ion channels and transporters in cancer. 6. Vascularizing the tumor: TRP channels as molecular targets. *Am J Physiol Cell Physiol*. 2012 Jan 1;302(1):C9-15.
62. Fiorio Pla A, Ong HL, Cheng KT, Brossa A, Bussolati B, Lockwich T, Paria B, **Munaron L**, Ambudkar IS. TRPV4 mediates tumor-derived endothelial cell migration via arachidonic acid-activated actin remodeling. *Oncogene*. 2012 Jan 12;31(2):200-12.
63. **Munaron L\***. Shuffling the cards in signal transduction: Calcium, arachidonic acid and mechanosensitivity. *World J Biol Chem*. 2011 Apr 26;2(4):59-66.
64. Moccia F, Bertoni G, Pla AF, Dragoni S, Pupo E, Merlino A, Mancardi D, **Munaron L**, Tanzi F. Hydrogen sulfide regulates intracellular Ca<sup>2+</sup> concentration in endothelial cells from excised rat aorta. *Curr Pharm Biotechnol*. 2011 Sep;12(9):1416-26.
65. Scianna M, **Munaron L**, Preziosi L. A multiscale hybrid approach for vasculogenesis and related potential blocking therapies. *Prog Biophys Mol Biol*. 2011 Aug;106(2):450-62.
66. Mancardi D, Pla AF, Moccia F, Tanzi F, **Munaron L**. Old and new gasotransmitters in the cardiovascular system: focus on the role of nitric oxide and hydrogen sulfide in endothelial cells and cardiomyocytes. *Curr Pharm Biotechnol*. 2011 Sep;12(9):1406-15.
67. Fiorio Pla A, Genova T, Pupo E, Tomatis C, Genazzani A, Zaninetti R, **Munaron L\***. Multiple roles of protein kinase a in arachidonic acid-mediated Ca<sup>2+</sup> entry and tumor-derived human endothelial cell migration. *Mol Cancer Res*. 2010 Nov;8(11):1466-76.



68. **Munaron L\***, Fiorio Pla A. Endothelial calcium machinery and angiogenesis: understanding physiology to interfere with pathology. *Curr Med Chem*. 2009;16(35):4691-703.
69. Antoniotti S, Fattori P, Tomatis C, Pessione E, **Munaron L\***. Arachidonic acid and calcium signals in human breast tumor-derived endothelial cells: a proteomic study. *J Recept Signal Transduct Res*. 2009;29(5):257-65.
70. Bussolati B, Ribatti D, **Munaron L**, Bartorelli A, Bussolati G. Anti-angiogenic properties of calcium trifluoroacetate. *Microvasc Res*. 2009 Dec;78(3):272-7.
71. Aina V, Malavasi G, Fiorio Pla A, **Munaron L**, Morterra C. Zinc-containing bioactive glasses: surface reactivity and behaviour towards endothelial cells. *Acta Biomater*. 2009 May;5(4):1211-22.
72. **Munaron L\***, Tomatis C, Fiorio Pla A. The secret marriage between calcium and tumor angiogenesis. *Technol Cancer Res Treat*. 2008 Aug;7(4):335-9.
73. Fiorio Pla A, Grange C, Antoniotti S, Tomatis C, Merlino A, Bussolati B, **Munaron L\***. Arachidonic acid-induced Ca<sup>2+</sup> entry is involved in early steps of tumor angiogenesis. *Mol Cancer Res*. 2008 Apr;6(4):535-45.
74. **Munaron L\***. Intracellular calcium, endothelial cells and angiogenesis. *Recent Pat Anticancer Drug Discov*. 2006 Jan;1(1):105-19.
75. Tomatis C, Fiorio Pla A, **Munaron L\***. Cytosolic calcium microdomains by arachidonic acid and nitric oxide in endothelial cells. *Cell Calcium*. 2007 Mar;41(3):261-9.
76. Antoniotti S, Fiorio Pla A, Barral S, Scalabrino O, **Munaron L**, Lovisolo D. Interaction between TRPC channel subunits in endothelial cells. *J Recept Signal Transduct Res*. 2006;26(4):225-40.
77. Cassoni P, Marrocco T, Bussolati B, Allia E, **Munaron L**, Sapino A, Bussolati G. Oxytocin induces proliferation and migration in immortalized human dermal microvascular endothelial cells and human breast tumor-derived endothelial cells. *Mol Cancer Res*. 2006 Jun;4(6):351-9.
78. Erriquez J, Gilardino A, Ariano P, **Munaron L**, Lovisolo D, Distasi C. Calcium signals activated by arachidonic acid in embryonic chick ciliary ganglion neurons. *Neurosignals*. 2005;14(5):244-54.
79. Mottola A, Antoniotti S, Lovisolo D, **Munaron L\***. Regulation of noncapacitative calcium entry by arachidonic acid and nitric oxide in endothelial cells. *FASEB J*. 2005 Dec;19(14):2075-7.
80. **Munaron L\***, Antoniotti S, Lovisolo D. Intracellular calcium signals and control of cell proliferation: how many mechanisms? *J Cell Mol Med*. 2004 Apr-Jun;8(2):161-8.
81. **Munaron L\***, Antoniotti S, Fiorio Pla A, Lovisolo D. Blocking Ca<sup>2+</sup> entry: a way to control cell proliferation. *Curr Med Chem*. 2004 Jun;11(12):1533-43.
82. Antoniotti S, Fiorio Pla A, Pregnolato S, Mottola A, Lovisolo D, **Munaron L\***. Control of endothelial cell proliferation by calcium influx and arachidonic acid metabolism: a pharmacological approach. *J Cell Physiol*. 2003 Dec;197(3):370-8.
83. **Munaron L\***. Calcium signalling and control of cell proliferation by tyrosine kinase receptors (review). *Int J Mol Med*. 2002 Dec;10(6):671-6.
84. Cassoni P, Sapino A, Deaglio S, Bussolati B, Volante M, **Munaron L**, Albini A, Torrisi A, Bussolati G. Oxytocin is a growth factor for Kaposi's sarcoma cells: evidence of endocrine-immunological cross-talk. *Cancer Res*. 2002 Apr 15;62(8):2406-13.
85. Antoniotti S, Lovisolo D, Fiorio Pla A, **Munaron L\***. Expression and functional role of bTRPC1 channels in native endothelial cells. *FEBS Lett*. 2002 Jan 16;510(3):189-95.
86. Fiorio Pla A, **Munaron L\***. Calcium influx, arachidonic acid, and control of endothelial cell proliferation. *Cell Calcium*. 2001 Oct;30(4):235-44.
87. Cassoni P, Sapino A, **Munaron L**, Deaglio S, Chini B, Graziani A, Ahmed A, Bussolati G. Activation of functional oxytocin receptors stimulates cell proliferation in human trophoblast and choriocarcinoma cell lines. *Endocrinology*. 2001 Mar;142(3):1130-6.
88. **Munaron L\***, Fiorio Pla A. Calcium influx induced by activation of tyrosine kinase receptors in cultured bovine aortic endothelial cells. *J Cell Physiol*. 2000 Dec;185(3):454-63.

89. Distasi C, Torre M, Antoniotti S, **Munaron L**, Lovisolo D. Neuronal survival and calcium influx induced by basic fibroblast growth factor in chick ciliary ganglion neurons. *Eur J Neurosci*. 1998 Jul;10(7):2276-86.
90. **Munaron L\***, Antoniotti S, Distasi C, Lovisolo D. Arachidonic acid mediates calcium influx induced by basic fibroblast growth factor in Balb-c 3T3 fibroblasts. *Cell Calcium*. 1997 Sep;22(3):179-88.
91. Cassoni P, Sapino A, Fortunati N, **Munaron L**, Chini B, Bussolati G. Oxytocin inhibits the proliferation of MDA-MB231 human breast-cancer cells via cyclic adenosine monophosphate and protein kinase A. *Int J Cancer*. 1997 Jul 17;72(2):340-4.
92. Lovisolo D, Distasi C, Antoniotti S, **Munaron L\***. Mitogens and calcium channels *News Physiol Sci*. 1997 Dec;12(6):279-285
93. Barbiero G, **Munaron L**, Antoniotti S, Baccino FM, Bonelli G, Lovisolo D. Role of mitogen-induced calcium influx in the control of the cell cycle in Balb-c 3T3 fibroblasts. *Cell Calcium*. 1995 Dec;18(6):542-56.
94. **Munaron L**, Distasi C, Carabelli V, Baccino FM, Bonelli G, Lovisolo D. Sustained calcium influx activated by basic fibroblast growth factor in Balb-c 3T3 fibroblasts. *J Physiol*. 1995 May 1;484 (3):557-66.
95. Distasi C, **Munaron L**, Laezza F, Lovisolo D. Basic fibroblast growth factor opens calcium-permeable channels in quail mesencephalic neural crest neurons. *Eur J Neurosci*. 1995 Mar 1;7(3):516-20.
96. Lovisolo D, **Munaron L**, Baccino FM, Bonelli G. Potassium and calcium currents activated by foetal calf serum in Balb-c 3T3 fibroblasts. *Biochim Biophys Acta*. 1992 Dec 9;1112(2):241-5.
97. Lovisolo D, Bonelli G, Baccino FM, Peres A, Alonzo F, **Munaron L**. Two currents activated by epidermal growth factor in EGFR-T17 fibroblasts. *Biochim Biophys Acta*. 1992 Feb 17;1104(1):73-82.
98. Gandino L, **Munaron L**, Naldini L, Ferracini R, Magni M, Comoglio PM. Intracellular calcium regulates the tyrosine kinase receptor encoded by the MET oncogene. *J Biol Chem*. 1991 Aug 25;266(24):16098-104.

#### Articles in books

1. Mussano F, Genova T, **Munaron L**, Faga MG, Carossa S. Ceramic Biomaterials for Dental Implants: Current Use and Future Perspectives. In *Dental implantology and Biomaterial*. Chapter 4, 63-90, Intech 2016.
2. **Munaron L\***. 'Calcium signaling and angiogenesis' in *Topics in Anti-Cancer Research*, Bentham Science Publ. Vol 3, 179-201, 2014.
3. **Munaron L\***. 'Calcium Signals in Endothelium and their Role in the Control of Angiogenesis' in *Frontiers in Anti-Cancer Drug Discovery*, Bentham Science Publ. Vol 1 194-218, 2010.
4. **Munaron L\***. 'Arachidonic Acid and Store-Independent Calcium Entry', in *Calcium Signaling: Regulation, Mechanisms, Effectors, Role in Disease and Recent Advances*, Ed. Simpson, A., The Biomedical & Life Sciences Collection, Henry Stewart Talks Ltd, London (online at <http://www.hstalks.com/bio>), 2007.
5. **Munaron L\***, Antoniotti S., Fiorio Pla A., Lovisolo D. 'Potentiality and Limitations of a Strategy for the Control of Cell Proliferation: The Block of Ca<sup>2+</sup> Entry', in *Frontiers in Medicinal Chemistry*, Bentham Science Publ, 3, 417-433, 2006.
6. **Munaron L\***. 'Calcium and angiogenesis' in *New angiogenesis research*, ed. Zubar RV, NOVA Publishers, 131-156, 2005.
7. Lovisolo D., Antoniotti S., Distasi C., Fiorio Pla A., Gilardino A. & **Munaron L**. 'Growth factors and calcium fluxes', in *Recent research developments in biophysical chemistry*, Ed. Condat & Baruzzi, Research SignPost, 57-68, 2002.
8. **Munaron L\*** & Fiorio Pla A. 'Non capacitative calcium signals activated by arachidonic acid in non excitable cells', in *Calcium signaling*, Ed. Morad & Kostyuk, IOS Press, 265-268, 2001.

#### \*Corresponding author

## DISSEMINATION ACTIVITY

### Books in Italian

*Fisiologia Evolutiva. Riflessioni su stabilità e modificazione nei viventi*, Franco Angeli Editore, 2019.

*Fisiologia della Cellula* (with Davide Lovisolo), Bollati Boringhieri, 2003.

*Dizionario di Biologia* (Multiple authors, curated by Aldo Fasolo), UTET, 2003.

### Book reviews on 'L'Indice dei libri del mese' (Italian)

1. Una pulsione condivisa da tutti i viventi. 2022
2. Vent'anni senza Gould. 2022
3. Quali sono i confini della biologia. 2022
4. Abbiamo bisogno del dottor Spock. 2020
5. Che cos'è l'eusocialità. 2020
6. Per la nascita di una umanità planetaria. 2020
7. I coralli sono vivi o morti? 2019
8. Il nonno di Charles. 2019
9. Un incontro mai avvenuto. 2019
10. Mio caro Neandertal. 2018
11. Il grande balzo in avanti. 2017
12. Tra Ippocrate e Galeno. 2017
13. Caprelli e lupocani come modelli matematici. 2016
14. Cinque anni sul Beagle. 2006
15. L'impero della vita. 2005
16. Modifiche nel sistema operativo. 2004
17. I casi della vita. 2004
18. Discipline anfibie. 2004
19. Perché ricordare Darwin. 2004
20. Morale darwiniana. 2003
21. Tempeste biogenetiche. 2002
22. Fisiologia ottocentesca. 2001

### Lectures of general interest

1. *Da Elephant man all'orco Shrek. Luca Munaron presenta Riflessioni sull'evoluzione degli esseri viventi.* Parole in tazza grande (streaming), Biblioteca Archimede di Settimo Torinese, 2020.
2. *Vasculature, angiogenesis and skin diseases.* Emotion, Erasmus Mundus Master, UniUpo, 2019.
3. *I Big Data E La Crisi Della Riproducibilità.* Biologia e ricadute applicative. Accademia delle Scienze di Torino 2019 (speaker). *Calcium day 2018. Novara, 2 luglio 2018 (Organizing Committee).*
4. *Nanomateriali e biotecnologie mediche. Le frontiere della biologia: una proposta formativa per gli insegnanti delle scuole superiori di secondo grado.* Torino 2018 (speaker).
5. *Il puzzle della vascolarizzazione nei tumori e la crisi della medicina classica.* Il edizione Torino Incontra, Biblioteca Calvino 2016 (speaker).
6. *I tortuosi sentieri verso l'illuminazione: l'evoluzione della visione e altre storie.* 3° Ciclo di conferenze di Biologia Marina, Associazione Bio.Ma, Torino 2005 (speaker).
7. *Il mare: la culla dell'evoluzione dei viventi.* 2° Ciclo di conferenze di Biologia Marina, Associazione Bio.Ma, Torino 2004 (speaker).

8. *Evoluzione 2004: la teoria, la ricerca, la didattica*, Torino (Director).
9. *L'eredità di Charles Darwin: tra ortodossia e pluralismo*. Workshop 'Evoluzione 2004: la teoria, la ricerca e la didattica', 2004 (Organizzatore e responsabile scientifico del Workshop) (speaker).
10. *Verso un Darwinismo pluralista*. Workshop 'Vincoli ambientali all'evoluzione ecologica ed economica'. Iris. Torino 2003 (speaker)

