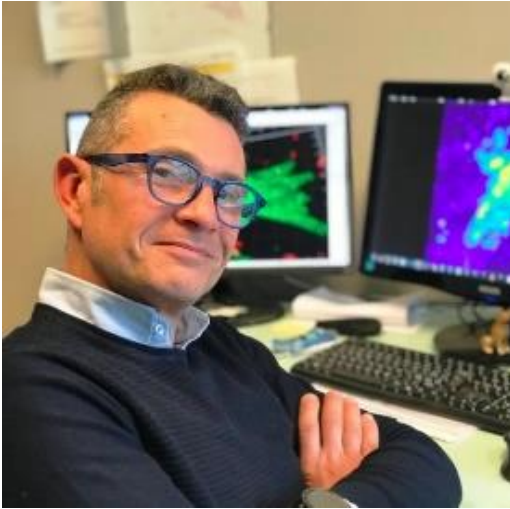


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Research field:

The area of scientific activity concerns muscle and neuronal physiology, focused on signal transduction mechanisms associated with the aspects of bioenergetics, development and differentiation mechanisms.

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Education and Qualifications:

- (2004-2006) Post-Doc in Muscle Pathophysiology University of "G. d'Annunzio" Chieti - Pescara, Italy
- (2004) Ph.D. in Muscle Physiopathology, University of "G. d'Annunzio" Chieti - Pescara, Italy,
- (1997) Degree on Pharmacy, University of "G. d'Annunzio" Chieti - Pescara, Chieti, Italy

Employment and Academic Ranks:

- (2006-to date) Assistant Professor of Physiology, University of "G. d'Annunzio" Chieti - Pescara, Italy
- (1999-2000) Research fellow: "Study of functional regulation in C2C12 cells by video imaging techniques" Italy, University of "G. d'Annunzio" Chieti - Pescara, Chieti, Italy
- (1998-1999) Research fellow: "Development of new methods for single cell live imaging of second messengers in confocal microscopy", University of "G. d'Annunzio" Chieti - Pescara, Chieti, Italy

Memberships in Scientific Societies

2020- ISHR International Society for Heart Research

2019- StemTech Group

2004- Italian Purine Club

2003- IIM - Interuniversity Institute of Myology

2000- Italian Society of Neurosciences

1998- Italian Society of Physiology

Editorial activity:

Scopus Parameters with date (H-index, citations): Plese see: Scopus link:

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Peer-Reviewed Publications (total):

Full list at the link: <https://www.scopus.com/authid/detail.uri?authorId=6603616203>

Most Significant Publications (n 10):

- Marrone M, La Rovere RML, Guarnieri S, Di Filippo ES, Monaco G, Pietrangelo T, Bultynck G, Fulle S, Mancinelli R. Superoxide Anion Production and Bioenergetic Profile in Young and Elderly Human Primary Myoblasts. *Oxid Med Cell Longev*. 2018 Jul 24;2018:2615372. doi: 10.1155/2018/2615372. eCollection 2018. PubMed PMID: 30140363; PubMed Central PMCID: PMC6081572.
- Caprara GA, Morabito C, Perni S, Navarra R, Guarnieri S, Marigliò MA. Evidence for Altered Ca(2+) Handling in Growth Associated Protein 43-Knockout Skeletal Muscle. *Front Physiol*. 2016 Oct 26;7:493. eCollection 2016. PubMed PMID: 27833566; PubMed Central PMCID: PMC5080375.
- Caprara GA, Perni S, Morabito C, Marigliò MA, Guarnieri S. Specific association of growth-associated protein 43 with calcium release units in skeletal muscles of lower vertebrates. *Eur J Histochem*. 2014 Dec 5;58(4):2453. doi: 10.4081/ejh.2014.2453. PubMed PMID: 25578978; PubMed Central PMCID: PMC4289850.
- Guarnieri S, Morabito C, Belia S, Barberi L, Musarò A, Fanò-Illic G, Marigliò MA. New insights into the relationship between mIGF-1-induced hypertrophy and Ca²⁺ handling in differentiated satellite cells. *PLoS One*. 2014 Sep 17;9(9):e107753. doi: 10.1371/journal.pone.0107753. eCollection 2014. PubMed PMID: 25229238; PubMed Central PMCID: PMC4168228.
- Guarnieri S, Morabito C, Paolini C, Boncompagni S, Pilla R, Fanò-Illic G, Marigliò MA. Growth associated protein 43 is expressed in skeletal muscle fibers and is localized in proximity of mitochondria and calcium release units. *PLoS One*. 2013;8(1):e53267. doi: 10.1371/journal.pone.0053267. Epub 2013 Jan 7. PubMed PMID: 23308181; PubMed Central PMCID: PMC3538766.
- Guarnieri S, Pilla R, Morabito C, Sacchetti S, Mancinelli R, Fanò G, Marigliò MA. Extracellular guanosine and GTP promote expression of differentiation markers and induce S-phase cell-cycle arrest in human SH-SY5Y neuroblastoma cells. *Int J Dev Neurosci*. 2009 Apr;27(2):135-47. doi: 10.1016/j.ijdevneu.2008.11.007. Epub 2008 Dec 6. PubMed PMID: 19111604.
- Pietrangelo T, Guarnieri S, Fulle S, Fanò G, Marigliò MA. Signal transduction events induced by extracellular guanosine 5' triphosphate in excitable cells. *Purinergic Signal*. 2006 Nov;2(4):633-6. doi: 10.1007/s11302-006-9021-3. Epub 2006 Jul 26. PubMed PMID: 18404466; PubMed Central PMCID: PMC2096655.
- Salvatorelli E, Guarnieri S, Menna P, Liberi G, Calafiore AM, Marigliò MA, Mordente A, Gianni L, Minotti G. Defective one- or two-electron reduction of the anticancer anthracycline epirubicin in human heart. Relative importance of vesicular sequestration and impaired efficiency of electron addition. *J Biol Chem*. 2006 Apr 21;281(16):10990-1001. Epub 2006 Jan 19. PubMed PMID: 16423826.
- Guarnieri S, Fanò G, Rathbone MP, Marigliò MA. Cooperation in signal transduction of extracellular guanosine 5' triphosphate and nerve growth factor in neuronal differentiation of PC12 cells. *Neuroscience*. 2004;128(4):697-712. PubMed PMID: 15464278.

- Gysbers JW, Guarnieri S, Mariggiò MA, Pietrangelo T, Fanò G, Rathbone MP. Extracellular guanosine 5' triphosphate enhances nerve growth factor-induced neurite outgrowth via increases in intracellular calcium. *Neuroscience*. 2000;96(4):817-24. PubMed PMID: 10727799.

Peer-Reviewed Publications (last 10 years):

1: Diomede F, Marconi GD, Guarnieri S, D'Attilio M, Cavalcanti MFXB, Mariggiò MA, Pizzicannella J, Trubiani O. A Novel Role of Ascorbic Acid in Anti-Inflammatory Pathway and ROS Generation in HEMA Treated Dental Pulp Stem Cells. *Materials (Basel)*. 2019 Dec 27;13(1). pii: E130. doi: 10.3390/ma13010130. PubMed PMID: 31892218; PubMed Central PMCID: PMC6981406.

2: Chiricosta L, Gugliandolo A, Diomede F, Pizzicannella J, Trubiani O, Iori R, Tardiolo G, Guarnieri S, Bramanti P, Mazzon E. Moringin Pretreatment Inhibits the Expression of Genes Involved in Mitophagy in the Stem Cell of the Human Periodontal Ligament. *Molecules*. 2019 Sep 4;24(18). pii: E3217. doi: 10.3390/molecules24183217. PubMed PMID: 31487916; PubMed Central PMCID: PMC6767209.

3: Puca V, Traini T, Guarnieri S, Carradori S, Sisto F, Macchione N, Muraro R, Mincione G, Grande R. The Antibiofilm Effect of a Medical Device Containing TIAB on Microorganisms Associated with Surgical Site Infection. *Molecules*. 2019 Jun 19;24(12). pii: E2280. doi: 10.3390/molecules24122280. PubMed PMID: 31248162; PubMed Central PMCID: PMC6630542.

4: Morabito C, Lanuti P, Caprara GA, Marchisio M, Bizzarri M, Guarnieri S, Mariggiò MA. Physiological Responses of Jurkat Lymphocytes to Simulated Microgravity Conditions. *Int J Mol Sci*. 2019 Apr 17;20(8). pii: E1892. doi: 10.3390/ijms20081892. PubMed PMID: 30999563; PubMed Central PMCID: PMC6515345.

5: Lazzarini R, Guarnieri S, Fulgenzi G, Mariggiò MA, Graciotti L, Martiniani M, Orciani M, Specchia N, Di Primio R. Mesenchymal Stem Cells from Nucleus Pulposus and Neural Differentiation Potential: a Continuous Challenge. *J Mol Neurosci*. 2019 Jan;67(1):111-124. doi: 10.1007/s12031-018-1216-x. Epub 2018 Nov 22. PubMed PMID: 30467823.

6: Marrone M, La Rovere RML, Guarnieri S, Di Filippo ES, Monaco G, Pietrangelo T, Bultynck G, Fulle S, Mancinelli R. Superoxide Anion Production and Bioenergetic Profile in Young and Elderly Human Primary Myoblasts. *Oxid Med Cell Longev*. 2018 Jul 24;2018:2615372. doi: 10.1155/2018/2615372. eCollection 2018. PubMed PMID: 30140363; PubMed Central PMCID: PMC6081572.

7: Di Baldassarre A, D'Amico MA, Izzicupo P, Gaggi G, Guarnieri S, Mariggiò MA, Antonucci I, Corneo B, Sirabella D, Stuppia L, Ghinassi B. Cardiomyocytes Derived from Human (Cardiopoietic) Amniotic Fluids. *Sci Rep*. 2018 Aug 13;8(1):12028. doi: 10.1038/s41598-018-30537-z. PubMed PMID: 30104705; PubMed Central PMCID: PMC6089907.

8: De Rocco D, Pompili B, Castellani S, Morini E, Cavinato L, Cimino G, Mariggiò MA, Guarnieri S, Conese M, Del Porto P, Ascenzioni F. Assembly and Functional Analysis of an S/MAR Based Episome with the Cystic Fibrosis Transmembrane Conductance Regulator Gene. *Int J Mol Sci*. 2018 Apr 17;19(4). pii: E1220. doi: 10.3390/ijms19041220. PubMed PMID: 29673202; PubMed Central PMCID: PMC5979583.

- 9: Pizzicannella J, Diomede F, Merciaro I, Caputi S, Tartaro A, Guarnieri S, Trubiani O. Endothelial committed oral stem cells as modelling in the relationship between periodontal and cardiovascular disease. *J Cell Physiol*. 2018 Oct;233(10):6734-6747. doi: 10.1002/jcp.26515. Epub 2018 Mar 30. PubMed PMID: 29600566.
- 10: Ugazio V, Guarnieri S. A Couple in Love Entangled in Enigmatic Episodes: A Semantic Analysis. *J Marital Fam Ther*. 2018 Jul;44(3):438-457. doi: 10.1111/jmft.12321. Epub 2018 Mar 7. PubMed PMID: 29513910.
- 11: Morabito C, Guarnieri S, Catizone A, Schiraldi C, Ricci G, Marigliò MA. Transient increases in intracellular calcium and reactive oxygen species levels in TCam-2 cells exposed to microgravity. *Sci Rep*. 2017 Nov 15;7(1):15648. doi: 10.1038/s41598-017-15935-z. PubMed PMID: 29142208; PubMed Central PMCID: PMC5688167.
- 12: Verginelli F, Perconti S, Vespa S, Schiavi F, Prasad SC, Lanuti P, Cama A, Tramontana L, Esposito DL, Guarnieri S, Sheu A, Pantalone MR, Florio R, Morgano A, Rossi C, Bologna G, Marchisio M, D'Argenio A, Taschin E, Visone R, Opocher G, Veronese A, Paties CT, Rajasekhar VK, Söderberg-Nauclér C, Sanna M, Lotti LV, Mariani-Costantini R. Correction to: Paragangliomas arise through an autonomous vasculo-angio-neurogenic program inhibited by imatinib. *Acta Neuropathol*. 2018 May;135(5):799. doi: 10.1007/s00401-018-1811-5. PubMed PMID: 29392445; PubMed Central PMCID: PMC6829697.
- 13: Totani L, Plebani R, Piccoli A, Di Silvestre S, Lanuti P, Recchiuti A, Cianci E, Dell'Elba G, Sacchetti S, Patruno S, Guarnieri S, Marigliò MA, Mari VC, Anile M, Venuta F, Del Porto P, Moretti P, Priolella M, Mucilli F, Marchisio M, Pandolfi A, Evangelista V, Romano M. Mechanisms of endothelial cell dysfunction in cystic fibrosis. *Biochim Biophys Acta Mol Basis Dis*. 2017 Dec;1863(12):3243-3253. doi: 10.1016/j.bbadis.2017.08.011. Epub 2017 Aug 25. PubMed PMID: 28847515.
- 14: Morabito C, Steimberg N, Rovetta F, Boniotti J, Guarnieri S, Mazzoleni G, Marigliò MA. Extremely Low-Frequency Electromagnetic Fields Affect Myogenic Processes in C2C12 Myoblasts: Role of Gap-Junction-Mediated Intercellular Communication. *Biomed Res Int*. 2017;2017:2460215. doi: 10.1155/2017/2460215. Epub 2017 May 21. PubMed PMID: 28607928; PubMed Central PMCID: PMC5457768.
- 15: Capasso L, D'Anastasio R, Guarnieri S, Viciano J, Marigliò M. Bone natural autofluorescence and confocal laser scanning microscopy: Preliminary results of a novel useful tool to distinguish between forensic and ancient human skeletal remains. *Forensic Sci Int*. 2017 Mar;272:87-96. doi: 10.1016/j.forsciint.2017.01.017. Epub 2017 Jan 22. PubMed PMID: 28129584.
- 16: Caprara GA, Morabito C, Perni S, Navarra R, Guarnieri S, Marigliò MA. Evidence for Altered Ca(2+) Handling in Growth Associated Protein 43-Knockout Skeletal Muscle. *Front Physiol*. 2016 Oct 26;7:493. eCollection 2016. PubMed PMID: 27833566; PubMed Central PMCID: PMC5080375.
- 17: Trubiani O, Guarnieri S, Diomede F, Marigliò MA, Merciaro I, Morabito C, Cavalcanti MF, Cocco L, Ramazzotti G. Nuclear translocation of PKC α isoenzyme is involved in neurogenic commitment of human neural crest-derived periodontal ligament stem cells. *Cell Signal*. 2016 Nov;28(11):1631-41. doi: 10.1016/j.cellsig.2016.07.012. Epub 2016 Jul 28. PubMed PMID: 27478064.

- 18: Cataldi A, Gallorini M, Di Giulio M, Guarnieri S, Marigliò MA, Traini T, Di Pietro R, Cellini L, Marsich E, Sancilio S. Adhesion of human gingival fibroblasts/*Streptococcus mitis* co-culture on the nanocomposite system Chitlac-nAg. *J Mater Sci Mater Med*. 2016 May;27(5):88. doi: 10.1007/s10856-016-5701-x. Epub 2016 Mar 12. PubMed PMID: 26970770; PubMed Central PMCID: PMC4789204.
- 19: Frazzini V, Guarnieri S, Bomba M, Navarra R, Morabito C, Marigliò MA, Sensi SL. Altered Kv2.1 functioning promotes increased excitability in hippocampal neurons of an Alzheimer's disease mouse model. *Cell Death Dis*. 2016 Feb 18;7:e2100. doi: 10.1038/cddis.2016.18. PubMed PMID: 26890139; PubMed Central PMCID: PMC5399189.
- 20: Morabito C, Lanuti P, Caprara GA, Guarnieri S, Verratti V, Ricci G, Catizone A, Marchisio M, Fanò-Illic G, Marigliò MA. Responses of peripheral blood mononuclear cells to moderate exercise and hypoxia. *Scand J Med Sci Sports*. 2016 Oct;26(10):1188-99. doi: 10.1111/sms.12557. Epub 2015 Oct 3. PubMed PMID: 26432186.
- 21: Lanuti P, Serafini F, Pierdomenico L, Simeone P, Bologna G, Ercolino E, Di Silvestre S, Guarnieri S, Canosa C, Impicciatore GG, Chiarini S, Magnacca F, Marigliò MA, Pandolfi A, Marchisio M, Di Giammarco G, Miscia S. Human Mesenchymal Stem Cells Reendothelialize Porcine Heart Valve Scaffolds: Novel Perspectives in Heart Valve Tissue Engineering. *Biores Open Access*. 2015 Jun 1;4(1):288-97. doi: 10.1089/biores.2015.0019. eCollection 2015. PubMed PMID: 26309804; PubMed Central PMCID: PMC4497625.
- 22: Pompilio A, De Nicola S, Crocetta V, Guarnieri S, Savini V, Carretto E, Di Bonaventura G. New insights in *Staphylococcus pseudintermedius* pathogenicity: antibiotic-resistant biofilm formation by a human wound-associated strain. *BMC Microbiol*. 2015 May 21;15:109. doi: 10.1186/s12866-015-0449-x. PubMed PMID: 25994406; PubMed Central PMCID: PMC4440327.
- 23: Morabito C, D'Alimonte I, Pierdomenico L, Pipino C, Guarnieri S, Caprara GA, Antonucci I, Ciccarelli R, Marchisio M, Pandolfi A, Marigliò MA. Calcitonin-induced effects on amniotic fluid-derived mesenchymal stem cells. *Cell Physiol Biochem*. 2015;36(1):259-73. doi: 10.1159/000374069. Epub 2015 May 4. PubMed PMID: 25967965.
- 24: Morabito C, Steimberg N, Mazzoleni G, Guarnieri S, Fanò-Illic G, Marigliò MA. RCCS bioreactor-based modelled microgravity induces significant changes on in vitro 3D neuroglial cell cultures. *Biomed Res Int*. 2015;2015:754283. doi: 10.1155/2015/754283. Epub 2015 Jan 13. PubMed PMID: 25654124; PubMed Central PMCID: PMC4309310.
- 25: Caprara GA, Perni S, Morabito C, Marigliò MA, Guarnieri S. Specific association of growth-associated protein 43 with calcium release units in skeletal muscles of lower vertebrates. *Eur J Histochem*. 2014 Dec 5;58(4):2453. doi: 10.4081/ejh.2014.2453. PubMed PMID: 25578978; PubMed Central PMCID: PMC4289850.
- 26: Guarnieri S, Morabito C, Belia S, Barberi L, Musarò A, Fanò-Illic G, Marigliò MA. New insights into the relationship between mIGF-1-induced hypertrophy and Ca²⁺ handling in differentiated satellite cells. *PLoS One*. 2014 Sep 17;9(9):e107753. doi: 10.1371/journal.pone.0107753. eCollection 2014. PubMed PMID: 25229238; PubMed Central PMCID: PMC4168228.

- 27: Dinicola S, Marigliò MA, Morabito C, Guarnieri S, Cucina A, Pasqualato A, D'Anselmi F, Proietti S, Coluccia P, Bizzarri M. Grape seed extract triggers apoptosis in Caco-2 human colon cancer cells through reactive oxygen species and calcium increase: extracellular signal-regulated kinase involvement. *Br J Nutr.* 2013 Sep 14;110(5):797-809. doi: 10.1017/S0007114512006095. Epub 2013 Feb 25. PubMed PMID: 23433299.
- 28: Delli Pizzi S, Rossi C, Di Matteo V, Esposito E, Guarnieri S, Marigliò MA, Franciotti R, Caulo M, Thomas A, Onofrij M, Tartaro A, Bonanni L. Morphological and metabolic changes in the nigrostriatal pathway of synthetic proteasome inhibitor (PSI)-treated rats: a MRI and MRS study. *PLoS One.* 2013;8(2):e56501. doi: 10.1371/journal.pone.0056501. Epub 2013 Feb 19. PubMed PMID: 23431380; PubMed Central PMCID: PMC3576393.
- 29: Guarnieri S, Morabito C, Paolini C, Boncompagni S, Pilla R, Fanò-Illic G, Marigliò MA. Growth associated protein 43 is expressed in skeletal muscle fibers and is localized in proximity of mitochondria and calcium release units. *PLoS One.* 2013;8(1):e53267. doi: 10.1371/journal.pone.0053267. Epub 2013 Jan 7. PubMed PMID: 23308181; PubMed Central PMCID: PMC3538766.
- 30: Sinjari B, Guarnieri S, Diomede F, Merciaro I, Mariggio MA, Caputi S, Trubiani O. Influence of titanium laser surface geometry on proliferation and on morphological features of human mandibular primary osteoblasts. *J Biol Regul Homeost Agents.* 2012 Jul-Sep;26(3):505-13. PubMed PMID: 23034270.
- 31: Del Porto P, Cifani N, Guarnieri S, Di Domenico EG, Marigliò MA, Spadaro F, Guglietta S, Anile M, Venuta F, Quattrucci S, Ascenzioni F. Dysfunctional CFTR alters the bactericidal activity of human macrophages against *Pseudomonas aeruginosa*. *PLoS One.* 2011;6(5):e19970. doi: 10.1371/journal.pone.0019970. Epub 2011 May 18. PubMed PMID: 21625641; PubMed Central PMCID: PMC3097223.
- 32: Orciani M, Morabito C, Emanuelli M, Guarnieri S, Sartini D, Giannubilo SR, Di Primio R, Tranquilli AL, Marigliò MA. Neurogenic potential of mesenchymal-like stem cells from human amniotic fluid: the influence of extracellular growth factors. *J Biol Regul Homeost Agents.* 2011 Jan-Mar;25(1):115-30. PubMed PMID: 21382281.
- 33 Grande R, Di Giulio M, Bessa LJ, Di Campi E, Baffoni M, Guarnieri S, Cellini L. Extracellular DNA in *Helicobacter pylori* biofilm: a backstairs rumour. *J Appl Microbiol.* 2011 Feb;110(2):490-8. doi: 10.1111/j.1365-2672.2010.04911.x. Epub 2010 Dec 10. PubMed PMID: 21143715.
- 34: Pompilio A, Crocetta V, Confalone P, Nicoletti M, Petrucca A, Guarnieri S, Fiscarelli E, Savini V, Piccolomini R, Di Bonaventura G. Adhesion to and biofilm formation on IB3-1 bronchial cells by *Stenotrophomonas maltophilia* isolates from cystic fibrosis patients. *BMC Microbiol.* 2010 Apr 7;10:102. doi: 10.1186/1471-2180-10-102. PubMed PMID: 20374629; PubMed Central PMCID: PMC2858031.