

Curriculum Vitae of Mario Rosario Buffelli

Affiliation and address:

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Education and positions:

- Novembre 1987: Medical Doctor, cum laude, University of Verona (Italy)
- 1990-1995: PhD in Neuroscience, University of Verona (Italy).
- 1998-2006: Researcher (tenured position), University of Verona (Italy).
- 2000-2002: Research work with Joshua Sanes and Jeff Lichtman at the Washington University Saint Louis (USA), Department of Anatomy and Neurobiology.
- Since 2003: Member of the PhD Program committee in Neuroscience.
- November 2006- September 2023: Associate Professor, University of Verona (Italy), Department of Neurosciences, Biomedicine and Movement Sciences.
- April 2017: National Scientific Habilitation to full Professor in Physiology.
- December 2022-September 2025: Director of the Interdepartmental Service Center for Experimental Research (CIRSAL) of the University of Verona.
- Since October 2023: Full Professor, University of Verona (Italy), Department of Neurosciences, Biomedicine and Movement Sciences.

Membership in professional societies:

- Italian Physiology Society (SIF)
- Italian Neuroscience Society (SINS)
- Society for Neuroscience (SFN-USA)
- Federation of European Neuroscience Societies (FENS).

Reviewer for the following international journals:

- Journal of Neuroscience
- European Journal of Neuroscience
- Neuroscience
- Frontiers in Cellular Neuroscience
- Frontiers in Neuroanatomy
- Frontiers in Aging Neuroscience
- Frontiers in Systems Neuroscience
- Current Alzheimer Research
- PLoS One

Reviewer for grants:

- National Science Foundation (NSF-USA)
- Italian Multiple Sclerosis Foundation (FISM)
- Italian Minister of Education of University and Research (MIUR)
- Marie Skłodowska-Curie Actions Individual Fellowships (MSCA-IF)

Principal lines of research (in chronological order)

- role of activity in controlling skeletal muscle properties;
- mechanisms underlying the formation of excitatory synapses in the peripheral and central nervous system;
- role of activity in reducing the number of synaptic contacts after birth, a process known as synapses elimination;
- intracellular signals underlying apoptosis and survival of neurons after injury;
- intracellular mechanisms underlying axonal regeneration;
- neurogenesis in physiological and pathological conditions in the adult;
- plasticity of dendritic spines in the cerebral cortex in physiological and pathological conditions (Alzheimer's disease, autism, X fragile syndrome);
- modulation of neural plasticity by glial cells (microglia and astrocytes);
- effects of transcranial stimulation in different animal models of human diseases;
- neural correlates underlying learning.

Grants:

He received grants from University of Verona (2002, 2004-2005, 2007, 2008, 2010-2014, 2017-2020, 2020-2022), Italian Ministry of Education, University and Research (MIUR)(PRIN 2004-2005; 2007-2008; 2017-2020; 2023-2026), and private foundations as Telethon-Italy (2003-2006), Fondazione Cariverona-Italy (2008-2010, 2012-2014, 2015-2017 and 2019-2022), Fondazione Fibrosi Cistica-Italy (2009-2010, 2011-2012 and 2013), Alzheimer's Association-US (2018-2021), Italian Multiple Sclerosis Foundation (2021-2022), Brain Research Fondation-Verona (2023-2024) e PNRR-project MNESYS (2023-2025).

Overall scientific activity:

He is co-author of more than 60 papers in international refereed journals. He is also co-author of 7 book chapters and more than 70 presentations at national and international congresses.

Bibliometric indexes:

Scopus (09/17/2026)- n. of total citations 1930, n. of documents present 67, H-index 26;

Web of Science (09/17/2026)- n. of total citations 1800, n. of documents present 76, H-index 24.

Since 2000 he has directed a research group of Neurobiology at the University of Verona.

He has obtained research funds from national and international bodies.

He has undertaken numerous scientific collaborations with Italian and foreign research centers and universities.

Teaching activity

Since the academic year 2002-2003 to today, He have been teaching Physiology in the following degree courses at the University of Verona:

- Bachelor's Degree in Obstetrics;
- Bachelor's Degree in Radiology Techniques for Imaging and Radiotherapy;
- Bachelor's Degree in Dental Hygiene;
- Bachelor's Degree Sport and Exercise Science;
- Specialist undergraduate Degree in the Science and Techniques of Sport Activities;
- Master's Degree in Preventative and Adapted Exercise Science;
- Bachelor's Degree in Biomedical Laboratory Techniques
- Bachelor's Degree in Physiotherapy;
- Bachelor's Degree in Bioinformatics;
- Bachelor's Degree in Biotechnology;
- Master's Degree in Bioinformatics and Medical Biotechnologies;
- Combined Bachelor's + Master's degree in Medicine and Surgery
- Combined Bachelor's + Master's degree in Pharmacy.

Publications (in reverse chronological order):

1. Marino N, Listro R, Milanese C, Bedeschi M, Cavassi E, Palazzi C, Cambiaghi M, **Buffelli MR**, Nicolini F, Dondio GM, Rossino G, Linciano P, Rossi D, Collina S, Tesei A. Sustainable chemistry and preclinical characterization of RC-106·HCl: A brain-penetrant pan sigma receptor modulator for glioblastoma. *Eur J Pharm Sci.* 2026 Jun 1;221:107519. doi: 10.1016/j.ejps.2026.107519.
2. Boda E, Marchiotto F, Pigozzi A, Buffo A, **Buffelli M**, Cambiaghi M. Transcranial direct current stimulation (tDCS) promotes myelin repair and plasticity in the mouse motor cortex bioRxiv 2026.01.20.700602; doi: <https://doi.org/10.64898/2026.01.20.700602>.
3. Marchiotto F, Cambiaghi M, **Buffelli M**. Physical activity and anodal-transcranial direct current stimulation: a synergistic approach to boost motor cortex plasticity. *Brain Communications*, Volume 7, Issue 3, 2025, fcaf167, <https://doi.org/10.1093/braincomms/fcaf167>.
4. Viola G, Trivellato D, Meulli L, Tira R, Lauriola A, Munari F, Montagnana M, **Buffelli M**, Assfalg M and D'Onofrio M. Stable ubiquitin conjugation for biological interrogation of ubiquitinated tau repeat domain. *Bioorg Chem*, 2024. 150: p. 107549. <https://doi.org/10.1016/j.bioorg.2024.107549>.
5. Vianello C, Salluzzo M, Anni D, Boriero D, **Buffelli M***, Carboni L (2023) Increased Expression of Autophagy-Related Genes in Alzheimer's Disease—Type 2 Diabetes Mellitus Comorbidity Models in Cells. *Int. J. Environ. Res. Public Health* 20, 4540. DOI: 10.3390/ijerph20054540 *Co-last authors
6. Cambiaghi M, Cordaro M, Dossena S, Cuzzocrea S and **Buffelli M** (2023) Editorial: Non-invasive brain stimulation techniques in neurological and neuropsychiatric disorders: Physiological and molecular evidence. *Front. Syst. Neurosci.* 17:1128205. DOI: 10.3389/

7. Massenzio, F., M. Cambiaghi, F. Marchiotto, D. Boriero, C. Limatola, G. D'Alessandro, and **M. Buffelli** (2022) In vivo morphological alterations of TAMs during KCa3.1 inhibition-by using in vivo two-photon time-lapse technology. *Front Cell Neurosci*, 2022. 16: p. 1002487. DOI:10.3389/fncel.2022.1002487
8. Cambiaghi M, Infortuna C, Gualano F, Elsamadisi A, Malik W, **Buffelli M**, Han Z, Solhkhah R, Thomas FP and Battaglia F (2022) High-frequency rTMS modulates emotional behaviors and structural plasticity in layers II/III and V of the mPFC. *Front. Cell. Neurosci.* 16:1082211. DOI: 10.3389/fncel.2022.1082211
9. Cherchi, L., Anni, D., **Buffelli, M.**, Cambiaghi, M. (2022) Early Application of Ipsilateral Cathodal-tDCS in a Mouse Model of Brain Ischemia Results in Functional Improvement and Perilesional Microglia Modulation. *Biomolecules* 2022,12,588. <https://doi.org/10.3390/biom12040588>
10. Cambiaghi, M., L. Cherchi, L. Masin, C. Infortuna, N. Briski, C. Caviasco, S. Hazaveh, Z. Han, **M. Buffelli**, and F. Battaglia, High-frequency repetitive transcranial magnetic stimulation enhances layer II/III morphological dendritic plasticity in mouse primary motor cortex. *Behavioural Brain Research*, 2021. 410: p. 113352. DOI:10.1016/j.bbr.2021.113352
11. Peikert, K., E. Federti, A. Matte, G. Constantin, E.C. Pietronigro, P.F. Fabene, P. Defilippi, E. Turco, F. Del Gallo, P. Pucci, A. Amoresano, A. Illiano, F. Cozzolino, M. Monti, F. Garelo, E. Terreno, S.L. Alper, H. Glaß, L. Pelzl, K. Akgün, T. Ziemssen, R. Ordemann, F. Lang, A.M. Brunati, E. Tibaldi, I. Andolfo, A. Iolascon, G. Bertini, **M. Buffelli**, C. Zancanaro, E. Lorenzetto, A. Siciliano, M. Bonifacio, A. Danek, R.H. Walker, A. Hermann, and L. De Franceschi, 2021. Therapeutic targeting of Lyn kinase to treat chorea-acanthocytosis. *Acta Neuropathologica Communications*, 2021. 9(1): p. 81. DOI:10.1186/s40478-021-01181-y
12. Pedrazzoli, M., Medelin, M., Marchiotto, F., Cisterna, B., Malatesta, M., **Buffelli, M.**, 2021. An improved and simplified protocol to combine Golgi-Cox staining with immunofluorescence and transmission electron microscopy techniques. *Neurochem Int*: 142, 104922. DOI: 10.1016/j.neuint.2020.104922
13. Cambiaghi M, Crupi R, Bautista EL, Elsamadisi A, Malik W, Pozdniakova H, Han Z, **Buffelli M**, Battaglia F. 2020. The Effects of 1-Hz rTMS on Emotional Behavior and Dendritic Complexity of Mature and Newly Generated Dentate Gyrus Neurons in Male Mice. *Int J Environ Res Public Health*. 2020 Jun 8;17(11):4074. DOI: 10.3390/ijerph17114074.
14. Losurdo, M., Pedrazzoli, M., D'Agostino, C., Elia, C.A., Massenzio, F., Lonati, E., Mauri, M., Rizzi, L., Molteni, L., Bresciani, E., Dander, E., D'Amico, G., Bulbarelli, A., Torsello, A., Matteoli, M., **Buffelli, M.**, Coco, S., (2020). Intranasal delivery of mesenchymal stem cell-derived extracellular vesicles exerts immunomodulatory and neuroprotective effects in a 3xTg model of Alzheimer's disease. *Stem Cells Transl Med* 9, 1068-1084. DOI:

15. Brozzetti L, Sacchetto L, Cecchini M, Avesani A, Perra D, Bongiani M, Portioli C, Scupoli M, Ghetti B, Monaco S, **Buffelli M** and Zanusso G (2020) Neurodegeneration-Associated Proteins in Human Olfactory Neurons Collected by Nasal Brushing. *Front. Neurosci.* 14:145. DOI: 10.3389/fnins.2020.00145
16. Cambiaghi M, **Buffelli M**, Masin L, Valtorta F, Comai S (2020) Transcranial direct current stimulation of the mouse prefrontal cortex modulates serotonergic neural activity of the dorsal raphe nucleus. *Brain Stimulation* 13:548-550. DOI:10.1016/j.brs.2020.01.012
17. Pedrazzoli M, Losurdo M, Paolone G, Medelin M, Jaupaj L, Cisterna B, Slanzi A, Malatesta M, Coco S, **Buffelli M** (2019) Glucocorticoid receptors modulate dendritic spine plasticity and microglia activity in an animal model of Alzheimer's disease. *Neurobiol Dis* 132: 104568. DOI:10.1016/j.nbd.2019.104568
18. Calderr, S, Bergamini G, Sandri A, Vercellone S, Rodella L, Cerofolini A, Tomba F, Catalano F, Frulloni L, **Buffelli M**, Tridello G, de Jonge H, Assael BM, Sorio C, and Melotti P (2019) Cystic fibrosis transmembrane conductance regulator functional evaluations in a G542X+/- IVS8Tn:T7/9 patient with acute recurrent pancreatitis. *World J Clin Cases*, 2019. 7(22): p. 3757-3764. DOI:10.12998/wjcc.v7.i22.3757
19. Brusini, L., F. Cruciani, I. Boscolo Galazzo, A. Galbusera, M. Borin, G. Paolone, G. Diana, **M. Buffelli**, A. Gozzi, and G. Menegaz (2019) Can single shell diffusion MRI detect synaptic plasticity in mice? in *Proceedings - International Symposium on Biomedical Imaging*.
20. Capaldi S, Suku E, Antolini M, Di Giacobbe M, Giorgetti A, **Buffelli M** (2018) Allosteric sodium binding cavity in GPR3: a novel player in modulation of A β production. *Scientific Reports* 8:11102. DOI : 10.1038/s41598-018-29475-7
21. Borin M, Saraceno C, Catania M, Lorenzetto E, Pontelli V, Paterlini A, Fostinelli S, Avesani A, Di Fede G, Zanusso G, Benussi L, Binetti G, Zorzan S, Ghidoni R, **Buffelli M**, Bolognin S (2018) Rac1 activation links tau hyperphosphorylation and A β dysmetabolism in Alzheimer's disease. *Acta Neuropathol Commun.* Jul 13;6(1):61. DOI: 10.1186/s40478-018-0567-4.
22. **Buffelli M**, Tognana E, Cangiano A, Busetto G (2018) Activity-dependent vs neurotrophic modulation of acetylcholine receptor expression: evidence from rat soleus and extensor digitorum longus muscles confirms the exclusive role of activity. *Eur J Neurosci.* 2018;47:1474–1481. DOI:10.1111/ejn.14020
23. Bertero A, Liska A, Pagani M, Parolisi R, Masferrer ME, Gritti M, Pedrazzoli M, Galbusera A, Sarica A, Cerasa A, **Buffelli M**, Tonini R, Buffo A, Gross C, Pasqualetti M, Gozzi A (2018) Autism-associated 16p11.2 microdeletion impairs prefrontal functional connectivity in mouse and human. *Brain* Jul 1;141(7):2055-2065. DOI: 10.1093/brain/awy111.

24. Asteriti S, Dal Cortivo G, Pontelli V, Cangiano L, **Buffelli M**, Dell'Orco D (2015) Effective delivery of recombinant proteins to rod photoreceptors via lipid nanovesicles. *Biochemical and biophysical research communications* 461:665-670. DOI:10.1016/j.bbrc.2015.04.088
25. Ettorre M, Verze G, Calderr S, Johansson J, Calcaterra E, Assael BM, Melotti P, Sorio C, **Buffelli M** (2014) Electrophysiological evaluation of Cystic Fibrosis Conductance Transmembrane Regulator (CFTR) expression in human monocytes. *Biochim Biophys Acta* 1840:3088-3095. DOI:10.1016/j.bbagen.2014.07.010
26. Johansson J, Vezzalini M, Verze G, Calderr S, Bolognin S, **Buffelli M**, Bellisola G, Tridello G, Assael BM, Melotti P, Sorio C (2014) Detection of CFTR protein in human leukocytes by flow cytometry. *Cytometry Part A : the journal of the International Society for Analytical Cytology* 85:611-620. DOI:10.1002/cyto.a.22456
27. Calderr S, Verze G, Johansson J, Sorio C, Angiari C, **Buffelli M**, Assael BM, Melotti P (2014) Challenging the diagnosis of Cystic Fibrosis in a patient carrying the 186-8T/C allelic variant in the CF Transmembrane Conductance Regulator gene. *BMC pulmonary medicine* 14:44. DOI:10.1186/1471-2466-14-44
28. Bolognin S, Lorenzetto E, Diana G, **Buffelli M** (2014) The Potential Role of Rho GTPases in Alzheimer's Disease Pathogenesis. *Mol Neurobiol* 50:406-22. DOI:10.1007/s12035-014-8637-5. DOI:10.1007/s12035-014-8637-5
29. Bolognin S, **Buffelli M**, Puolivali J, Iqbal K (2014) Rescue of cognitive-aging by administration of a neurogenic and/or neurotrophic compound. *Neurobiology of Aging* 35:2134-2146. DOI:10.1016/j.neurobiolaging.2014.02.017.
30. Lorenzetto E, Moratti E, Vezzalini M, Harroch S, Sorio C, **Buffelli M** (2014) Distribution of different isoforms of receptor protein tyrosine phosphatase gamma (Ptpg-RPTP gamma) in adult mouse brain: upregulation during neuroinflammation. *Brain Structure & Function* 219:875-890. DOI:10.1007/s00429-013-0541-7.
31. Lorenzetto E., Ettorre M., Pontelli V., Bolomini-Vittori M., Bolognin S., Zorzan S., Laudanna C., **Buffelli M**. (2013) "Rac1 selective activation improves retina ganglion cell survival and regeneration". *PLoS ONE* 8(5): e64350. DOI:10.1371/journal.pone.0064350.
32. Martino A, Ettorre M, Musilli M, Lorenzetto E, **Buffelli M** and Diana G (2013). Rho GTPase-dependent plasticity of dendritic spines in the adult brain. *Frontiers in Cellular Neuroscience* 7:62. DOI: 10.3389/fncel.2013.00062.
33. Zorzan S, Lorenzetto E, Ettorre M, Pontelli V, Laudanna C, **Buffelli M** (2013) HOMECAT: consensus homologs mapping for interspecific knowledge transfer and functional genomic data integration. *Bioinformatics* 29:1574-1576. DOI:10.1093/bioinformatics/btt189

34. Bolognin S., Zatta P., Lorenzetto E., Valenti M. T., **Buffelli M.**, (2013) beta-Amyloid-aluminum complex alters cytoskeletal stability and increases ROS production in cortical neurons. *Neurochemistry International* 62, 566-574. DOI:10.1016/j.neuint.2013.02.008.
35. Laperchia C, Allegra Mascaro AL, Sacconi L, Andrioli A, Matte A, De Franceschi L, Grassi-Zucconi G, Bentivoglio M, **Buffelli M**, Pavone FS (2013) Two-Photon Microscopy Imaging of thylGFP-M Transgenic Mice: A Novel Animal Model to Investigate Brain Dendritic Cell Subsets In Vivo. *PLoS One* 8:e56144. DOI:10.1371/journal.pone.0056144.
36. Sorio C, Angiari C, Johansson J, Verze G, Ettore M, **Buffelli M**, Castellani C, Assael BM, Melotti P (2013) Impaired CFTR function in mild cystic fibrosis associated with the S977F/T5TG12complex allele in trans with F508del mutation. *Journal of cystic fibrosis* 12(6):821-5. DOI:10.1016/j.jcf.2012.12.014.
37. Ettore M., Lorenzetto E., Laperchia C., Baiguera C., Benarese M., Branca M., Spano P.F., Pizzi M., **Buffelli M.** (2012) Glutamatergic neurons induce expression of functional glutamatergic synapses in primary myotubes. *PLoS One* 7, e31451. DOI:10.1371/journal.pone.0031451.
38. Chakkalakal JV, Kuang S, **Buffelli M**, Lichtman JW, Sanes JR (2012) Mouse transgenic lines that selectively label Type I, Type IIA and Types IIX+B skeletal muscle fibers. *Genesis* 50: 50-58. DOI:10.1002/dvg.20794
39. **Buffelli M.**, Busetto G., Favero M., Cangiano L., and Cangiano A. (2011). Synaptic plasticity at developing neuromuscular junctions: role of the timing of spike activity in the competing inputs. *Archives Italiennes de Biologie*, 149: 167-174.
40. Sorio* C., **Buffelli M***, Angiari C., Ettore M., Johansson J., Vezzalini M., Viviani L., Ricciardi M., Verzè G., Assale BM., Melotti P. (2011). Defective CFTR expression and function are detectable in blood monocytes: development of a new blood test for cystic fibrosis. *PLoS One* 6(7): e22212. DOI:10.1371/journal.pone.0022212 *These authors contributed equally to this work.
41. Favero M., **Buffelli M.**, Cangiano A., Busetto G. (2010). The timing of impulse activity shapes the process of synaptic competition at the neuromuscular junction. *Neuroscience* 167:343-353. DOI:10.1016/j.neuroscience.2010.01.055
42. Costantini C., Lorenzetto E., Cellini B., **Buffelli M.**, Rossi F., Della-Bianca V. (2010). Astrocytes regulate the expression of insulin-like growth factor 1 receptor (IGF1-R) in primary cortical neurons during in vitro senescence. *Journal of Molecular Neuroscience* 40:342-352. DOI:10.1007/s12031-009-9305-5
43. Sacconi, L., L. Allegra, **M. Buffelli**, P. Cesare, E. Dangelo, D. Gandolfi, G. Grasselli, J. Lotti, J. Mapelli, P. Strata, and F.S. Pavone. (2010) Brain plasticity and functionality explored by nonlinear optical microscopy. in *Proceedings of SPIE - The International Society for Optical Engineering*.

44. Francolini M., Brunelli G., Cambianica I., Barlati S., Barbon A., La Via L., Guarneri B., Boroni F., Lanzillotta A.M., Baiguera C., Ettore M., **Buffelli M.**, Spano P.F., Clementi F., Pizzi M. (2009). Glutamatergic reinnervation and assembly of glutamatergic synapses in adult rat skeletal muscle occurs at cholinergic endplates. *Journal of Neuropathology and Experimental Neurology* 68:1103-1115. DOI:10.1097/NEN.0b013e3181b7bfc8.
45. Lorenzetto E., Caselli L., Feng G., Yuan W., Nerbonne J.M., Sanes J.R., **Buffelli M.** (2009). Genetic perturbation of postsynaptic activity regulates synapse elimination in developing cerebellum. *Proceedings of the National Academy of Sciences of the United States of America* 106:16475-16480. DOI:10.1073/pnas.0907298106.
46. Favero M., Massella O., Cangiano A., **Buffelli M.** (2009). On the mechanism of action of muscle fiber activity in synapse competition and elimination at the mammalian neuromuscular junction. *European Journal of Neuroscience* 29:2327-2334. DOI:10.1111/j.1460-9568.2009.06779.x
47. Lorenzetto E., Panteri R., Marino R., Keller F., **Buffelli M.** (2008). Impaired nerve regeneration in reeler mice after peripheral nerve injury. *European Journal of Neuroscience* 27:12-19. DOI: 10.1111/j.1460-9568.2007.05978.x.
48. Sacconi, L., R.P. O'Connor, A. Jasaitis, A. Masi, M. Buffelli, and F.S. Pavone (2008). In vivo multi-photon nanosurgery on cortical neurons: Focusing on network organization. in *Progress in Biomedical Optics and Imaging - Proceedings of SPIE*.
49. Sacconi L., O'Connor R.P., Jasaitis A., Masi A., **Buffelli M.**, Pavone F.S. (2007). In vivo multiphoton nanosurgery on cortical neurons. *Journal of Biomedical Optics* 12:050502. DOI: 10.1117/1.2798723.
50. Favero M., Lorenzetto E., Bidoia C., **Buffelli M.**, Busetto G., Cangiano A. (2007). Synapse formation and elimination: role of activity studied in different models of adult muscle reinnervation. *Journal of Neuroscience Research* 85:2610-2619. DOI: 10.1002/jnr.21143.
51. Panteri R., Mey J., Zhelyaznik N., D'Altocolle A., Del Fa A., Gangitano C., Marino R., Lorenzetto E., **Buffelli M.**, Keller F. (2006). Reelin is transiently expressed in the peripheral nerve during development and is upregulated following nerve injury. *Molecular and cellular Neuroscience*, 32:133-142. DOI: 10.1016/j.mcn.2006.03.004.
52. Bidoia C., Misgeld T., Weinzierl E., **Buffelli M.**, Feng G., Cangiano A., Lichtman J.W., Sanes J.R. (2004). Comment on: "Reelin promotes peripheral synapse elimination and maturation." *Science, Technical Comment*, 303: 1977. DOI:10.1126/science.1094146.
53. **Buffelli M.**, Busetto G., Bidoia C., Favero M., Cangiano A. (2004). Activity-dependent synaptic competition at mammalian neuromuscular junctions. *News In Physiological Sciences*, 19: 85-91. DOI:10.1152/nips.01464.2003.

54. Busetto G., **Buffelli M.**, Cangiano L., Cangiano A. (2003). Effects of evoked and spontaneous motoneuronal firing on synapse competition and elimination in skeletal muscle. *Journal of Neurocytology* 32:795-802. DOI: 10.1023/B:NEUR.0000020624.48032.ed.
55. **Buffelli M.**, Burgess R.W., Feng G., Lobe C.G., Lichtman J.W., Sanes J.R. (2003). Genetic evidence that relative synaptic efficacy biases the outcome of synaptic competition. *Nature* 424:430-434. DOI:10.1038/nature01844
56. **Buffelli M.**, Busetto G., Cangiano L., Cangiano A. (2002). Perinatal switch from synchronous to asynchronous activity of motoneurons: link with synapse elimination. *Proceedings of the National Academy of Sciences of the United States of America* 99:13200-13205. DOI:10.1073/pnas.202471199.
57. **Buffelli M.**, Pasino E., Cangiano A. (2001). In vivo acetylcholine receptor expression induced by calcitonin gene-related peptide in rat soleus muscle. *Neuroscience* 104:561-567. DOI: 10.1016/s0306-4522(01)00090-2.
58. **Buffelli M.**, Busetto G., Cangiano A. (2001). The use of in vivo direct drug application to assess neural regulation of muscle properties. *Journal of Neuroscience Methods* 106:113-120. DOI: 10.1016/s0165-0270(00)00352-6.
59. Busetto G., **Buffelli M.**, Tognana E., Bellico F., Cangiano A. (2000). Hebbian mechanisms revealed by electrical stimulation at developing rat neuromuscular junctions. *Journal of Neuroscience* 20:685-695. DOI:10.1523/jneurosci.20-02-00685.2000
60. **Buffelli M.**, Pasino E., Cangiano A. (1997). Paralysis of innervated and reinnervated muscles equally affects contractile properties as does permanent denervation. *Journal of Muscle Research and Cell Motility* 18:683-695. DOI: 10.1023/a:1018687923929.
61. Pasino E., **Buffelli M.**, Busetto G., Cangiano A. (1997). Use of dexamethasone with TTX block of nerve conduction shows that muscle membrane properties are fully controlled by evoked activity. *Brain Research* 770:242-247. DOI: 10.1016/s0006-8993(97)00881-0
62. Cangiano A., **Buffelli M.**, Busetto G., Tognana E., Pasino E. (1997). Studies on anterograde trophic interactions based on general muscle properties. *Archives Italiennes De Biologie* 157: 331-341.
63. Pasino E., **Buffelli M.**, Arancio O., Busetto G., Salviati A., Cangiano A. (1996). Effects of long term conduction block on membrane properties of reinnervated and normally innervated rat skeletal muscle. *Journal of Physiology (Lond)* 497.2:457-472. DOI: 10.1113/jphysiol.1996.sp021780.

64. Ricci R., **Buffelli M.**, Riviera A.P., Cangiano A. (1996). An electrophysiological study of calcium entry during normal human T-lymphocyte activation. FEBS Letters 390: 78-80. DOI:10.1016/0014-5793(96)00630-8
65. Cangiano A., **Buffelli M.**, Busetto G., Pasino E. (1993). Fisiologia della trasmissione neuromuscolare. Rivista Italiana di Neuroscienze:1: 12-22.
66. Arancio O., **Buffelli M.**, Cangiano A., Pasino E. (1992). Nerve stump effects in muscle are independent of synaptic connections and are temporally correlated with nerve degeneration phenomena. Neuroscience Letters 146: 1-4. DOI:10.1016/0304-3940(92)90157-3

Chapter of Books (in reverse chronological order)

1. Mordecai P. Blaustein, Joseph P. Y. Kao, Donald R. Matteson, Fisiologia cellulare e Neurofisiologia, 3rd edition, Piccin (2024) (collaborazione alla traduzione per l'edizione italiana).
2. Belfiore - Berteotti - Biella - **Buffelli** - Colombini - AAVV (2018) Fisiologia umana - Fondamenti, Editore: Edi-ermes.
3. Stanfield Fisiologia V edizione, Edises s.r.l. 2017 (translation collaboration for the Italian edition).
4. Scelfo B. and **Buffelli M.** (2009). Developmental Axonal Pruning and Synaptic Plasticity. Pages 107-140. In: Hortsch M and Hisashi U, (eds.), The sticky synapse – cell adhesion molecules and their role in synapse formation and maintenance. New York: Springer.
5. Busetto G., Tognana E., **Buffelli M.**, Pasino E., Cangiano A. (1997). Role of activity in ectopic synapse formation in skeletal muscle. Libro Giubilare dedicato a G.C. Guazzi, Siena, 171-179.
6. Cangiano A., **Buffelli M.**, Pasino E. (1993). Nerve-muscle trophic interaction. Pages 145-167. In: Gorio A, (ed.), Neuroregeneration. New York: Raven Press.
7. **Buffelli M.**, Cangiano A., Pasino E. (1993). Interazioni trofiche nervo-muscolo. Pagg. 161-183. In: Giuditta A, (ed.), Apprendimento e Memoria. Milano: Pythagora Press.

September 17th, 2026

Mario Buffelli