

## CURRICULUM VITAE

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### **Indirizzo di lavoro**

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### **Educazione**

1988 Laurea in Scienze Biologiche, Università di Genova.  
1998 Dottorato di Ricerca in Neuroscienze Università "Tor Vergata", Roma.

### **Esperienza professionale**

1990-1994 Post-Doctoral Fellow, Fidia-Georgetown Institute for the Neurosciences, Georgetown University, Washington DC, USA.  
1994-1996 Visiting Research Scientist, Nathan S. Kline Institute for Psychiatric Research, Center for Neuropharmacology, New York University, NY, NY, U.S.A.  
1996-1997 Research Associate, The Psychiatric Institute, Department of Psychiatry, The University of Illinois at Chicago, Chicago, Illinois, USA.  
1998 Dipartimento di Neuroscienze, Università degli Studi di Roma "Tor Vergata"  
1999 Borsista presso IRCCS "Fondazione Santa Lucia"  
2000-data attuale Ricercatore presso l' IRCCS "Fondazione Santa Lucia", Responsabile Unità di Neurobiologia Molecolare I

### **Didattica**

2006-present Professore Aggiunto di Fisiologia Corso di Laurea di "Scienze Infermieristiche" Università di "Tor Vergata", Roma.  
2013-present Professore Aggiunto di Fisiologia Corso di Laurea di "Logopedia" Università di "Tor Vergata", Roma.

**Referee per:** Neuroscience, Neuropharmacology, Brain Research, Eur. J. Neuroscience, J. Neurochemistry, Neurobiology of Diseases, PLOS One, Scientific Reports, Frontiers in Neuroscience.

**H index: Google Scholar 25; Scopus 23.**

**Lingue:** Inglese ottima scritto e parlato  
Francese scolastica

## Pubblicazioni

- Johnson IP, Longone P. Commentary: Amyotrophic Lateral Sclerosis and Myasthenia Gravis Overlap Syndrome: A Review of Two Cases and the Associated Literature. *Front Neurol.* 2017 Jul 27;8:356. doi: 10.3389/fneur.2017.00356. eCollection 2017. doi: 10.3389/fneur.2017.00356
- Parisi C, Napoli G, Amadio S, Spalloni A, Apolloni S, Longone P, Volonté C. MicroRNA-125b regulates microglia activation and motor neuron death in ALS. *Cell Death Differ.* 2016 Jan 22. doi: 10.1038/cdd.2015.153.
- Spalloni A, Longone P. Cognitive impairment in amyotrophic lateral sclerosis, clues from the SOD1 mouse. *Neurosci Biobehav Rev.* 2016 60:12-25.
- Davoli A, Greco V, Spalloni A, Guatteo E, Neri C, Rizzo GR, Cordella A, Romigi A, Cortese C, Bernardini S, Sarchielli P, Cardaioli G, Calabresi P, Mercuri NB, Urbani A, Longone P. Evidence of hydrogen sulfide involvement in amyotrophic lateral sclerosis. *Ann Neurol.* 2015 77(4):697-709.
- Ranno E, D'Antoni S, Spatuzza M, Berretta A, Laureanti F, Bonaccorso CM, Pellitteri R, Longone P, Spalloni A, Iyer AM, Aronica E, Catania MV. Endothelin-1 is over-expressed in amyotrophic lateral sclerosis and induces motor neuron cell death. *Neurobiol Dis.* 2014 65:160-171.
- di Michele F, Luchetti S, Bernardi G, Romeo E, Longone P. Neurosteroid and neurotransmitter alterations in Parkinson's disease. *Front Neuroendocrinol.* 2013 34(2):132-142.
- Spalloni A, Nutini M, Longone P. Role of the N-methyl-d-aspartate receptors complex in amyotrophic lateral sclerosis. *Biochim Biophys Acta.* 2013 1832(2):312-322.
- Middei S, Spalloni A, Longone P, Pittenger C, O'Mara SM, Marie H, Ammassari-Teule M. CREB selectively controls learning-induced structural remodeling of neurons. *Learn Mem.* 2012 19(8):330-336.
- D'Alessandro A, D'Aguzzo S, Cencioni MT, Pieroni L, Diamantini A, Battistini L, Longone P, Spalloni A, De Laurenzi V, Bernardini S, Federici G, Urbani A. Protein repertoire impact of Ubiquitin-Proteasome System impairment: insight into the protective role of beta-estradiol. *J Proteomics.* 2012 75(4):1440-1453.
- Armogida M, Spalloni A, Amantea D, Nutini M, Petrelli F, Longone P, Bagetta G, Nisticò R, Mercuri NB. The protective role of catalase against cerebral ischemia in vitro and in vivo. *Int J Immunopathol Pharmacol.* 2011 24(3):735-747.
- Nutini M, Spalloni A, Florenzano F, Westenbroek RE, Marini C, Catterall WA, Bernardi G, Longone P. Increased expression of the beta3 subunit of voltage-gated Na<sup>+</sup> channels in the spinal cord of the SOD1G93A mouse. *Mol Cell Neurosci.* 2011 47(2):108-118.



D'Antoni S, Berretta A, Seminara G, Longone P, Giuffrida-Stella AM, Battaglia G, Sortino MA, Nicoletti F, Catania MV. A prolonged pharmacological blockade of type-5 metabotropic glutamate receptors protects cultured spinal cord motor neurons against excitotoxic death. *Neurobiol Dis.* 2011 42(3):252-64.

Longone P, di Michele F, D'Agati E, Romeo E, Pasini A, Rupprecht R. Neurosteroids as neuromodulators in the treatment of anxiety disorders. *Front Endocrinol (Lausanne).* 2011 19;2:55.

Nutini M, Frazzini V, Marini C, Spalloni A, Sensi SL, Longone P. Zinc pre-treatment enhances NMDAR-mediated excitotoxicity in cultured cortical neurons from SOD1(G93A) mouse, a model of amyotrophic lateral sclerosis. *Neuropharmacology.* 2011 60(7-8):1200-1208.

Spalloni A, Origlia N, Sgobio C, Trabalza A, Nutini M, Berretta N, Bernardi G, Domenici L, Ammassari-Teule M, Longone P. Postsynaptic alteration of NR2A subunit and defective autophosphorylation of alphaCaMKII at threonine-286 contribute to abnormal plasticity and morphology of upper motor neurons in presymptomatic SOD1G93A mice, a murine model for amyotrophic lateral sclerosis. *Cereb Cortex.* 2011 21(4):796-805.

Farioli-Vecchioli S, Saraulli D, Costanzi M, Leonardi L, Cinà I, Micheli L, Nutini M, Longone P, Oh SP, Cestari V, Tirone F. Impaired terminal differentiation of hippocampal granule neurons and defective contextual memory in PC3/Tis21 knockout mice. *PLoS One.* 2009 4(12):e8339.

Ferrucci M, Spalloni A, Bartalucci A, Cantafora E, Fulceri F, Nutini M, Longone P, Paparelli A, Fornai F. A systematic study of brainstem motor nuclei in a mouse model of ALS, the effects of lithium. *Neurobiol Dis.* 2010 37(2):370-383.

Pasquali L, Longone P, Isidoro C, Ruggieri S, Paparelli A, Fornai F. Autophagy, lithium, and amyotrophic lateral sclerosis. *Muscle Nerve.* 2009 Aug;40(2):173-194.

Fornai F, Longone P, Ferrucci M, Lenzi P, Isidoro C, Ruggieri S, Paparelli A. Autophagy and amyotrophic lateral sclerosis: The multiple roles of lithium. *Autophagy.* 2008 4(4):527-530.

Fornai F, Longone P, Cafaro L, Kastsiuchenka O, Ferrucci M, Manca ML, Lazzeri G, Spalloni A, Bellio N, Lenzi P, Modugno N, Siciliano G, Isidoro C, Murri L, Ruggieri S, Paparelli A. Lithium delays progression of amyotrophic lateral sclerosis. *Proc Natl Acad Sci U S A.* 2008 105(6):2052-2057.

Sgobio C, Trabalza A, Spalloni A, Zona C, Carunchio I, Longone P, Ammassari-Teule M. Abnormal medial prefrontal cortex connectivity and defective fear extinction in the presymptomatic G93A SOD1 mouse model of ALS. *Genes Brain Behav.* 2008 7(4):427-434.

Longone P, Rupprecht R, Manieri GA, Bernardi G, Romeo E, Pasini A. The complex roles of neurosteroids in depression and anxiety disorders. *Neurochem Int.* 2008 52(4-5):596-601.

Florenzano F, Viscomi MT, Mercaldo V, Longone P, Bernardi G, Bagni C, Molinari M, Carrive P. P2X2R purinergic receptor subunit mRNA and protein are expressed by all hypothalamic hypocretin/orexin neurons. *J Comp Neurol*. 2006 498(1):58-67.

Luchetti S, di Michele F, Romeo E, Brusa L, Bernardi G, Cummings BJ, Longone P. Comparative non-radioactive RT-PCR assay: an approach to study the neurosteroids biosynthetic pathway in humans. *J Neurosci Methods*. 2006 153(2):290-298.

Spalloni A, Geracitano R, Berretta N, Sgobio C, Bernardi G, Mercuri NB, Longone P, Ammassari-Teule M. Molecular and synaptic changes in the hippocampus underlying superior spatial abilities in pre-symptomatic G93A+/+ mice overexpressing the human Cu/Zn superoxide dismutase (Gly93 --> ALA) mutation. *Exp Neurol*. 2006 197(2):505-514.

Federici M, Geracitano R, Tozzi A, Longone P, Di Angelantonio S, Bengtson CP, Bernardi G, Mercuri NB. Trace amines depress GABA B response in dopaminergic neurons by inhibiting G-betagamma-gated inwardly rectifying potassium channels. *Mol Pharmacol*. 2005 67(4):1283-1290.

Spalloni A, Pascucci T, Albo F, Ferrari F, Puglisi-Allegra S, Zona C, Bernardi G, Longone P. Altered vulnerability to kainate excitotoxicity of transgenic-Cu/Zn SOD1 neurones. *Neuroreport*. 2004 15(16):2477-2480.

Fusco FR, Martorana A, Giampà C, De March Z, Vacca F, Tozzi A, Longone P, Piccirilli S, Paolucci S, Sancesario G, Mercuri NB, Bernardi G. Cellular localization of TRPC3 channel in rat brain: preferential distribution to oligodendrocytes. *Neurosci Lett*. 2004 365(2):137-142.

Ferri A, Nencini M, Casciati A, Cozzolino M, Angelini DF, Longone P, Spalloni A, Rotilio G, Carrì MT. Cell death in amyotrophic lateral sclerosis: interplay between neuronal and glial cells. *FASEB J*. 2004 18(11):1261-1263.

Spalloni A, Albo F, Ferrari F, Mercuri N, Bernardi G, Zona C, Longone P. Cu/Zn-superoxide dismutase (GLY93-->ALA) mutation alters AMPA receptor subunit expression and function and potentiates kainate-mediated toxicity in motor neurons in culture. *Neurobiol Dis*. 2004 15(2):340-350.

Pieri M, Albo F, Gaetti C, Spalloni A, Bengtson CP, Longone P, Cavalcanti S, Zona C. Altered excitability of motor neurons in a transgenic mouse model of familial amyotrophic lateral sclerosis. *Neurosci Lett*. 2003 351(3):153-156.

Tozzi A, Bengtson CP, Longone P, Carignani C, Fusco FR, Bernardi G, Mercuri NB. Involvement of transient receptor potential-like channels in responses to mGluR-I activation in midbrain dopamine neurons. *Eur J Neurosci*. 2003 18(8):2133-2145.

di Michele F, Longone P, Romeo E, Lucchetti S, Brusa L, Pierantozzi M, Bassi A, Bernardi G, Stanzione P. Decreased plasma and cerebrospinal fluid content of neuroactive steroids in Parkinson's disease. *Neurol Sci*. 2003 24(3):172-173.

Pieri M, Gaetti C, Spalloni A, Cavalcanti S, Mercuri N, Bernardi G, Longone P, Zona C. alpha-Amino-3-hydroxy-5-methyl-isoxazole-4-propionate receptors in spinal cord



motor neurons are altered in transgenic mice overexpressing human Cu,Zn superoxide dismutase (Gly93-->Ala) mutation. *Neuroscience*. 2003;122(1):47-58.

Geracitano R, Paolucci E, Prisco S, Guatteo E, Zona C, Longone P, Ammassari-Teule M, Bernardi G, Berretta N, Mercuri NB. Altered long-term corticostriatal synaptic plasticity in transgenic mice overexpressing human CU/ZN superoxide dismutase (GLY(93)-->ALA) mutation. *Neuroscience*. 2003;118(2):399-408.

Zona C, Tancredi V, Longone P, D'Arcangelo G, D'Antuono M, Manfredi M, Avoli M. Neocortical potassium currents are enhanced by the antiepileptic drug lamotrigine. *Epilepsia*. 2002 43(7):685-690.

Auta J, Longone P, Guidotti A, Costa E. The regulation of hippocampal nicotinic acetylcholine receptors (nAChRs) after a protracted treatment with selective or nonselective nAChR agonists. *J Mol Neurosci*. 1999 13(1-2):31-45.

Longone P, Impagnatiello F, Mienville JM, Costa E, Guidotti A. Changes in AMPA receptor-spliced variant expression and shift in AMPA receptor spontaneous desensitization pharmacology during cerebellar granule cell maturation in vitro. *J Mol Neurosci*. 1998 11(1):23-41.

Uz T, Pesold C, Longone P, Manev H. Aging-associated up-regulation of neuronal 5-lipoxygenase expression: putative role in neuronal vulnerability. *FASEB J*. 1998 12(6):439-449.

Uz T, Longone P, Manev H. Increased hippocampal 5-lipoxygenase mRNA content in melatonin-deficient, pinealectomized rats. *J Neurochem*. 1997 69(5):2220-2223.

Impagnatiello F, Oberto A, Longone P, Costa E, Guidotti A. 7-Chloro-3-methyl-3,4-dihydro-2H-1,2,4-benzothiadiazine S,S-dioxide: a partial modulator of AMPA receptor desensitization devoid of neurotoxicity. *Proc Natl Acad Sci U S A*. 1997 Jun 24;94(13):7053-7058.

Chen ZW, Bergman T, Jörnvall H, Bonetto V, Norberg A, Mutt V, Longone P, Costa E, Efendic S, Ostenson CG. Full-length and N-terminally truncated chicken intestinal diazepam-binding inhibitor. Purification, structural characterization and influence on insulin release. *Regul Pept*. 1997 Mar 26;69(2):63-68.

Impagnatiello F, Pesold C, Longone P, Caruncho H, Fritschy JM, Costa E, Guidotti A. Modifications of gamma-aminobutyric acidA receptor subunit expression in rat neocortex during tolerance to diazepam. *Mol Pharmacol*. 1996 49(5):822-831.

Longone P, Impagnatiello F, Guidotti A, Costa E. Reversible modification of GABAA receptor subunit mRNA expression during tolerance to diazepam-induced cognition dysfunction. *Neuropharmacology*. 1996 35(9-10):1465-1473.

Oberto A, Longone P, Krueger KE. Identification of three transcriptional regulatory elements in the rat mitochondrial benzodiazepine receptor-encoding gene. *Gene*. 1995 167(1-2):255-260.

Costa E, Cheney DL, Grayson DR, Korneyev A, Longone P, Pani L, Romeo E, Zivkovich E, Guidotti A. Pharmacology of neurosteroid biosynthesis. Role of the

mitochondrial DBI receptor (MDR) complex. *Ann N Y Acad Sci.* 1994 746:223-242.

Longone P, Mocchetti I, Riva MA, Wojcik WJ. Characterization of a decrease in muscarinic m2 mRNA in cerebellar granule cells by carbachol. *J Pharmacol Exp Ther.* 1993 265(1):441-446.

Lanciotti M, Longone P, Cornaglia-Ferraris P, Ponzoni M. Retinoic acid inhibits phosphatidylinositol turnover only in RA-sensitive while not in RA-resistant human neuroblastoma cells. *Biochem Biophys Res Commun.* 1989 161(1):284-289.

Damonte G, Morelli A, Piu M, Longone P, De Flora A. "In situ" characterization of guanine nucleotide-binding properties of erythrocyte membranes. *Biochem Biophys Res Commun.* 1989 159(1):41-47.