

Curriculum Vitae

Personal details

First name: Dalila

Last name: Mango

Date of birth: 30 January 1986

Place of birth: Cosenza (CS)

Citizenship: Italian

E-mail: dalilamango@gmail.com; d.mango@ebri.it

Education and degrees

Degree in Pharmaceutical chemistry and technology - 2010, l'Università della Calabria, Facoltà di Farmacia, Rende, Italy;

PhD in Neuroscience - 2014, l'Università di Roma "Tor Vergata", School of Medicine, Rome, Italy;

XII Summer School of Neuroscience DOPAMINE in memoriam of Professor Umberto Scapagnini - 2014, International PhD Program in Neuroscience University of Catania;

FELASA cat.B accredited course - 2015 "Scienza degli animali da laboratorio", CERC, Rome, Italy.

Academic Appointments/Research experience

2011-2013: Fellowship for PhD in Neuroscience, Università di Roma "Tor Vergata", School of Medicine, Rome, Italy;

2014 - : post Doc in Pharmacology of Synaptic Plasticity Laboratory at the European Brain Research Institute- Rita Levi-Montalcini Foundation, Rome , Italy.

2015: Fellowship SIF-MSD for "*Targeting protein SUMOylation changes in experimental Alzheimer's disease*".

2016-2017: Research grant for "*Meccanismi neurofisiologici di plasticità sinaptica: identificazione dei target molecolari per farmaci innovativi nella malattia di Alzheimer*", Department of Physiology and Pharmacology 'Vittorio Erspamer', Sapienza Università di Roma, Rome, Italy;

2018-2020: Research fellowship for "*Valutazione degli effetti neuroprotettivi di hNGFp in modelli sperimentali di ischemia-ipossia cerebrale neonatale e adulta*", Fondazione Istituto Neurologico Nazionale Casimiro Mondino, Pavia, Italy.

2020-2022 : Research Assistant for "*Ligandi selettivi del recettore mGlu3 come agenti terapeutici nel Parkinsonismo sperimentale*", Department of Biology, Università di Roma "Tor Vergata", Rome, Italy.

Main research activity

I am currently interested in synaptic mechanisms with particular regard for synaptic plasticity in the mammalian central nervous system. Synaptic plasticity is an essential property of the brain implicated in development and underlying learning and memory processes. Alterations of these processes occurred in various neurodegenerative disorders, including Alzheimer's disease and Multiple Sclerosis. In particular, I focus on the phenomena of long-term potentiation (LTP) and long-term depression (LTD) in the hippocampus, a brain region important for learning and memory and cognitive processes. Over the past years, I have studied how neuroinflammation and excitotoxicity lead to impairments in LTP and memory in mice that model Alzheimer's disease (AD) and Multiple Sclerosis (MS).

List of publications:

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1. Ledonne A, **Mango D**, Bernardi G, Berretta N, Mercuri NB. A continuous high frequency stimulation of the subthalamic nucleus determines a suppression of excitatory synaptic transmission in nigral dopamine in vitro. *Exp Neurol*. 2012 Jan;233(1):292-302. doi: 10.1016/j.expneurol.2011.10.018. Epub 2011 Oct 28;
2. Berretta N, Ledonne A, **Mango D**, Bernardi G, Mercuri NB. Hippocampus versus entorhinal cortex decoupling by an NR2 subunit-specific block of NMDA receptors in a rat in vitro model of temporal lobe epilepsy. *Epilepsia*. 2012 May;53(5):e80-4. doi: 10.1111/j.1528-1167.2012.03420.x. Epub 2012 Feb 23;
3. **Mango D***, Nisticò R*, Mandolesi G, Piccinin S, Berretta N, Pignatelli M, Feligioni M, Musella A, Gentile A, Mori F, Bernardi G, Nicoletti F, Mercuri NB, Centonze D. Inflammation subverts hippocampal synaptic plasticity in experimental multiple sclerosis. *PLoS One*. 2013;8(1):e54666. doi: 10.1371/journal.pone.0054666. Epub 2013 Jan 23. *equal contribution;
4. Mori D, Rossi S, Piccinin S, Motta C, **Mango D**, Kusayanagi H, Bergami A, Studer V, Nicoletti C, Buttari F, Barbieri F, Mercuri NB, Martino G, Furlan R, Nisticò R, Centonze D. Synaptic plasticity and PDGF signaling defects underlie clinical progression in Multiple Sclerosis. *J Neurosci*. 2013 Dec 4;33(49):19112-9;
5. Nisticò R, Piccinin S, Schepisi C, Ferraina C, Laurenza M, **Mango D**, Graziani M, Nicoletti F, Mercuri NB, Feligioni M. Pharmacological modulation of long-term potentiation in animal models of Alzheimer's disease. *J Biol Reg Homeost Ag*. 2013; 27(2):37-47;
6. Mori F, Nisticò R, Mandolesi G, Piccinin S, **Mango D**, Kusayanagi H, Berretta N, Bergami A, Gentile A, Musella A, Nicoletti CG, Nicoletti F, Buttari F, Mercuri NB, Martino G, Furlan R, Centonze D. Interleukin-1beta Promotes Long-Term Potentiation in Patients with Multiple Sclerosis. *Neuromolecular Med*. 2014 Mar;16(1):38-51;

7. **Mango D**, Bonito-Oliva A, Ledonne A, Nisticò R, Castelli V, Giorgi M, Sancesario G, Fisone G, Berretta N, Mercuri NB. Phosphodiesterase 10A controls D1-mediated facilitation of GABA release from striato-nigral projections under normal and dopamine-depleted conditions. *Neuropharmacology*. 2014 Jan;76 Pt A:127-36;
8. **Mango D**, Barbato G, Piccirilli S, Panico MB, Feligioni M, Schepisi C, Graziani M, Porrini V, Benarese M, Lanzillotta A, Pizzi M, Pieraccini S, Sironi M, Blandini F, Nicoletti F, Mercuri NB, Imbimbo BP, **Nisticò R**. Electrophysiological and metabolic effects of CHF5074 in the hippocampus: Protection against in vitro ischemia. *Pharmacol Res*. 2014 Mar 12;81C:83-90;
9. Errico F, Nisticò R, Di Giorgio A, Squillace M, Vitucci D, Galbusera A, Piccinin S, **Mango D**, Fazio L, Middei S, Trizio S, Mercuri NB, Teule MA, Centonze D, Gozzi A, Blasi G, Bertolino A, Usiello A. Free D-aspartate regulates neuronal dendritic morphology, synaptic plasticity, gray matter volume and brain activity in mammals. *Transl Psychiatry*. 2014 Jul 29;4:e417;
10. **Mango D**, Bonito-Oliva A, Ledonne A, Cappellacci L, Petrelli R, **Nisticò R**, Berretta N, Fisone G, Mercuri NB. Adenosine A1 receptor stimulation reduces D1 receptor-mediated GABAergic transmission from striato-nigral terminals and attenuates l-DOPA-induced dyskinesia in dopamine-denervated mice. *Exp Neurol*. 2014 Nov;261:733-43;
11. Nisticò R, Florenzano F, **Mango D**, Ferraina C, Grilli M, Di Prisco S, Nobili A, Saccucci S, D'Amelio M, Morbin M, Marchi M, Mercuri NB, Davis RJ, Pittaluga A, Feligioni M. Presynaptic c-Jun N-terminal Kinase 2 regulates NMDA receptor-dependent glutamate release. *Sci Rep*. 2015 Mar 12;5:9035;
12. Cristino L, Luongo L, Squillace M, Paolone G, **Mango D**, Piccinin S, Zianni E, Imperatore R, Iannotta M, Longo F, Errico F, Vescovi AL, Morari M, Maione S, Gardoni F, Nisticò R, Usiello A*. d-Aspartate oxidase influences glutamatergic system homeostasis in mammalian brain. *Neurobiol Aging*. 2015 May;36(5):189;
13. Feligioni M*, **Mango D***, Piccinin S, Imbriani P, Iannuzzi F, Caruso A, De Angelis F, Blandini F, Mercuri NB, Pisani A, Nisticò R. Subtle alterations of excitatory transmission are linked to presynaptic changes in the hippocampus of PINK1-deficient mice. *Synapse*. 2016 Feb 5. doi: 10.1002/syn.21894; *co-author
14. **Mango D**, Weisz F, Nisticò R. Ginkgolic acid protects against A β -induced synaptic dysfunction in the hippocampus. *Front. Pharmacol*. 2016 , doi: 10.3389/fphar.2016.00401;
15. Jaco A, **Mango D**, Angelis F, Favalaro FL, Andolina D, Nisticò R, Fiori E, Colamartino M, Pascucci T. Unbalance between Excitation and Inhibition in Phenylketonuria, a Genetic Metabolic Disease Associated with Autism. *Int J Mol Sci*. 2017 Apr 29;18(5). pii: E941. doi: 10.3390/ijms18050941;
16. Weisz F, Piccinin S, **Mango D**, Ngomba RT, Mercuri NB, Nicoletti F, Nisticò R. The role of adiponectin receptors in the regulation of synaptic transmission in the hippocampus. *Synapse*. 2017 Feb 10. doi: 10.1002/syn.21964. [Epub ahead of print];

17. **D. Mango**, E. Braksator, G. Battaglia, S. Marcelli, N.B. Mercuri, M. Feligioni, F. Nicoletti, Z.I. Bashir, R. Nisticò. Acid-sensing ion channel 1a is required for mGlu receptor dependent long-term depression in the hippocampus. *Pharmacol Res.* 2017 Jan 27. pii: S1043-6618(16)30426-1. doi: 10.1016/j.phrs.2017.01.028. [Epub ahead of print];
18. Nisticò R, Salter E, Nicolas C, Feligioni M, **Mango D**, Bortolotto ZA, Gressens P, Collingridge GL, Peineau S. Synaptoimmunology - roles in health and disease. *Mol Brain.* 2017 Jun 20;10(1):26. doi: 10.1186/s13041-017-0308-9. Review;
19. Ledonne A, **Mango D**, Latagliata EC, Chiacchierini G, Nobili A, Nisticò R, D'Amelio M, Puglisi-Allegra S, Mercuri NB. Neuregulin 1/ErbB signalling modulates hippocampal mGluRI-dependent LTD and object recognition memory. *Pharmacol Res.* 2018 Apr;130:12-24. doi: 10.1016/j.phrs.2018.02.003. Epub 2018 Feb 7;
20. Maccarrone M, Totaro A, Leuti A, Giacobazzo G, Scipioni L, **Mango D**, Coccurello R, Nisticò R, Oddi S. Early alteration of distribution and activity of hippocampal type-1 cannabinoid receptor in Alzheimer's disease-like mice overexpressing the human mutant amyloid precursor protein. *Pharmacol Res.* 2018 Apr;130:366-373. doi: 10.1016/j.phrs.2018.02.009. Epub 2018 Feb 14;
21. **Mango D**, Nisticò R. Role of ASIC1a in A β -induced synaptic alterations in the hippocampus. *Pharmacol Res.* 2018 May;131:61-65. doi: 10.1016/j.phrs.2018.03.016. Epub 2018 Mar 21;
22. Caruso A, Nicoletti F, **Mango D**, Saidi A, Orlando R, Scaccianoce S. Stress as risk factor for Alzheimer's disease. *Pharmacol Res.* 2018 Apr 22;132:130-134. doi: 10.1016/j.phrs.2018.04.017. [Epub ahead of print] Review;
23. **Mango D**, Nisticò R, Furlan R, Finardi A, Centonze D, Mori F. PDGF Modulates Synaptic Excitability and Short-Latency Afferent Inhibition in Multiple Sclerosis. *Neurochem Res.* 2019 Mar;44(3):726-733. doi: 10.1007/s11064-018-2484-0. Epub 2018 Feb 1;
24. **Mango D**, Caruso A, Saidi A, Nisticò R, Scaccianoce S. The positive allosteric modulator at mGlu2 receptors, LY487379, reverses the effects of chronic stress-induced behavioral maladaptation and synaptic dysfunction in the adulthood. *Synapse.* 2019 Apr 9. doi: 10.1002/syn.22101. [Epub ahead of print];
25. Marcelli S, Iannuzzi F, Ficulle E, **Mango D**, Pieraccini S, Pellegrino S, Corbo M, Sironi M, Pittaluga A, Nisticò R, Feligioni M. The selective disruption of presynaptic JNK2/STX1a interaction reduces NMDA receptor-dependent glutamate release. *Sci Rep.* 2019 May 9;9(1):7146. doi: 10.1038/s41598-019-43709-2;
26. Hampel H, Lista S, **Mango D**, Nisticò R, Perry G, Avila J, Hernandez F, Geerts H, Vergallo A; Alzheimer Precision Medicine Initiative (APMI). Lithium as a Treatment for Alzheimer's Disease: The Systems Pharmacology Perspective. *J Alzheimers Dis.* 2019 May 27. doi: 10.3233/JAD-190197. [Epub ahead of print];

27. **Mango D**, Nisticò R. Acid-Sensing Ion Channel 1a Is Involved in N-Methyl D-Aspartate Receptor- Dependent Long-Term Depression in the Hippocampus. *Front Pharmacol.* 2019 May 21;10:555. doi: 10.3389/fphar.2019.00555. eCollection 2019;
28. **Mango D**, Saidi A, Cisale GY, Feligioni M, Corbo M, Nisticò R. Targeting Synaptic Plasticity in Experimental Models of Alzheimer's Disease. *Front Pharmacol* 2019 -. PMID 31379566.
29. **Mango D**, Nisticò R. Role of ASIC1ain normal and pathological synaptic plasticity. *Reviews in Physiology, Biochemistry and Pharmacology Rev Physiol Biochem Pharmacol.* 2020 Aug 14. doi: 10.1007/112_2020_45