

CURRICULUM VITAE

Guendalina Olivero



📍 Department of Pharmacy (DIFAR), Pharmacology and Toxicology Section
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CURRENT POSITION Post-doc position

WORK EXPERIENCE

April 2017 - today

Post-doc position in the project "*Pharmacological and functional characterization of the mGlu2/3 – 5HT2A receptor-receptor interaction in the central nervous system of mammals*" (Prof. Anna Pittaluga)
University of Genova, DIFAR (Department of Pharmacy, Pharmacology and Toxicology section)

October 2016 - April 2017

Wolfson Centre for Age-Related Diseases, King's College, London (Prof. Marzia Malcangio)
Visiting Post-doctoral scientist

March 2014 - February 2017

Post-doc position in the project "*Therapeutics in the drug addiction and depression: role of the functional interaction between opioid receptors and other receptors*" (Prof. Mario Marchi and prof. Anna Pittaluga)
University of Genova, DIFAR (Department of Pharmacy, Pharmacology and Toxicology section)

January 2011 - December 2013

PhD student

University of Genova, DIFAR (Department of Pharmacy, Pharmacology and Toxicology section)

EDUCATION AND TRAINING

14-4-2014

PhD in Pharmacology and Toxicology, School of Biology and experimental, molecular and clinical Medicine. Thesis: "*Beta-amyloid and modulation of cholinergic neurotransmission in Central Nervous System*"
University of Genova, DIFAR (Department of Pharmacy, Pharmacology and Toxicology section)

January 2011 – December 2013

PhD Student

University of Genova, DIFAR (Department of Pharmacy, Pharmacology and Toxicology section)

July 2010

Degree in Pharmacy, University of Genova. Final mark: 110/110 (cum laude)

Thesis: "Dopaminergic modulation of dopamine release evoked by nicotine in rat and mouse nucleus accumbens"

University of Genova

May 2009 - July 2010

Undergraduated internship at Department of Pharmacy, Pharmacology and Toxicology section, University of Genova

September 2005 - July 2010

Student at University of Genova (Pharmacy)

University of Genova

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B2	C1	B2	B2	C1
PET with merit, University of Cambridge 30/06/2003				

Digital skills

ECDL: European Computer Driving Licence (N° IT 548497) 20/05/2004
Office, SigmaPlot, SigmaStat, GraphPad Prism e KyPlot

SCIENTIFIC SKILLS

Job-related skills

Methods to study the mechanisms of neurotransmitter release from *in vitro* tissue preparations (synaptosomes and gliosomes) and its modulation by receptors under physiological and pathological conditions. Identification and pharmacological characterization of presynaptic receptor types and subtypes regulating neurotransmitter release and study of their interactions. Immunocytochemistry techniques: western blot, biotinylation, immunoprecipitation and confocal microscopy. HPLC analysis. qPCR.

Bibliometric indices

<https://www.scopus.com/authid/detail.uri?authorId=53064168100>

PUBLICATIONS LIST

IRIS: <https://iris.unige.it/cris/rp/rp00025#.XGFPZiThArg>

Olivero G., Vergassola M., Cisani F., Usai C., Pittaluga A.

Immuno-Pharmacological Characterization of Presynaptic GluN3A-Containing NMDA Autoreceptors: Relevance to Anti-NMDA Receptor Autoimmune Diseases.

Mol Neurobiol. 2019 Feb 7. doi: 10.1007/s12035-019-1511-8.

Vergassola M., Olivero G., Cisani F., Usai C., Bossi S., Puliti A., Pittaluga A.

Presynaptic mGlu1 receptors control GABAB receptors in an antagonist-like manner in mouse cortical GABAergic and glutamatergic nerve endings.

Front Mol Neurosci. 2018 Sep 18;11:324. doi: 10.3389/fnmol.2018.00324.

S. Morley-Fletcher, A.R. Zuenza, J. Mairesse, E. Gatta, G. Van Camp, H. Bouwalerh, B. Rizzo, G. Battaglia, A. Pittaluga, G. Olivero, E. Mocaer, S. Bretin, F. Nicoletti, S. Maccari.

The reduction in glutamate release is predictive of cognitive and emotional alterations that are corrected by the positive modulator of AMPA receptors S 47445 in perinatal stressed rats

Neuropharmacology. 2018 Jun;135:284-296. doi: 10.1016/j.neuropharm.2018.03.018.

Tommaso B., Matteo V., Olivero G., Pittaluga A.

Environmental Training And Synaptic Functions In Young And Old Brain: A Presynaptic Perspective.

Curr Med Chem. 2018 Feb 28. doi: 10.2174/0929867325666180228170450.

Olivero G., Grilli M., Vergassola M., Bonfiglio T., Padolecchia C., Garrone B., Di Giorgio FP, Tongiani S., Usai C., Marchi M., Pittaluga A.

5-HT_{2A}-mGlu_{2/3} receptor complex in rat spinal cord glutamatergic nerve endings: A 5-HT_{2A} to mGlu_{2/3} signalling to amplify presynaptic mechanism of auto-control of glutamate exocytosis.

Neuropharmacology. 2018 May 1;133:429-439. doi: 10.1016/j.neuropharm.2018.02.030.

Bonfiglio T*, Olivero G*, Vergassola M, Di Cesare Mannelli L, Pacini A, Iannuzzi F, Summa M, Bertorelli R, Feligioni M, Ghelardini C, Pittaluga A.

Environmental training is beneficial to clinical symptoms and cortical presynaptic defects in mice suffering from experimental autoimmune encephalomyelitis.

Neuropharmacology. 2018 Feb 2. pii: S0028-3908(18)30026-1. doi: 10.1016/j.neuropharm.2018.01.026.

Olivero G, Bonfiglio T, Vergassola M, Usai C, Rizzo B, Battaglia G, Nicoletti F, Pittaluga A. Immuno-pharmacological characterization of group II metabotropic glutamate receptors controlling glutamate exocytosis in mouse cortex and spinal cord.

Br J Pharmacol. 2017 Dec;174(24):4785-4796. doi: 10.1111/bph.14061.

Florenzano F., Corsetti V., Ciasca G., Ciotti M.T., Pittaluga A., Olivero G., Feligioni M., Iannuzzi F., Latina V., Sciacca M. F. M., Sinopoli A., Milardi D., Pappalardo G., De Spirito M., Papi M., Rizzarelli E., Atlante A., Bobba A., Calissano P., Amadoro G.

The secreted, pathologically-relevant N-terminal fragment of human tau causes early presynaptic dysfunction with Alzheimer's disease and other tauopathies.

Oncotarget. 2017 Apr 22. doi: 10.18632/oncotarget.17371.

Bonfiglio T*, Olivero G*, Merega E., Di Prisco S., Padolecchia C., Grilli M., Milanese M., Di Cesare Mannelli L., Ghelardini C., Bonanno G., Marchi M., Pittaluga A.

Prophylactic versus therapeutic fingolimod: Restoration of presynaptic defects in mice suffering from experimental autoimmune encephalomyelitis. Plos one, 2017 Jan 26; 12(1):e0170825. doi 10.1371/journal.pone.0170825.

Di Prisco S., Olivero G., Merega E., Bonfiglio T., Marchi M., Pittaluga A.

CXCR4 and NMDA receptors are functionally coupled in rat hippocampal noradrenergic and glutamatergic nerve endings. Journal of Neuroimmune Pharmacology, 2016 May 5; doi:10.1007/s11481-016-9677-6

Di Prisco S., Merega E., Bonfiglio T., Olivero G., Cervetto C., Grilli M., Usai C., Marchi M., Moon J., Pittaluga A., 2016.

Presynaptic, release-regulating mGlu₂-preferring and mGlu₃-preferring autoreceptors in CNS: pharmacological profiles and functional roles in demyelinating disease

British Journal of Pharmacology 2016 Jan 21. doi: 10.1111/bph.13442.

Bisio A., Fedele E., Pittaluga A., Olivero G., Grilli M., Chen J., Mele G., Malafronte N., De Tommasi N., Ledda F., Manconi R., Pronzato R., Marchi M., 2014.

Isolation of hydroxyoctaprenyl-1',4'-hydroquinone, a new octaprenylhydroquinone from the marine sponge *Sarcotragus spinosulus* and evaluation of its pharmacological activity on acetylcholine and glutamate release in the rat central nervous system.

Natural product communications 11/2014; 9(11):1581-4.

Zappettini S., Grilli M., Olivero G., Chen J., Padolecchia C., Pittaluga A., R Tomé A Cunha R.A., Marchi M., 2014.

Nicotinic $\alpha 7$ receptor activation selectively potentiates the function of NMDA receptors in glutamatergic terminals of the nucleus accumbens. Frontiers in Cellular Neuroscience 2014 Oct 16;8:332.

Olivero G., Grilli M., Chen J., Preda S., Mura E., Govoni S., Marchi M., 2014.

Effects of soluble β -amyloid on the release of neurotransmitters from rat brain synaptosomes.

Front Aging Neurosci. 2014 Jul 15;6:166.

Salamone A., Zappettini S., Grilli M., Olivero G., Agostinho P., R.Tomé A., Chen J., Pittaluga A., Marchi M., 2014.

Prolonged nicotine exposure down-regulates presynaptic NMDA receptors in dopaminergic terminals of the rat nucleus accumbens
Neuropharmacology 2014 Apr;79:488-97. Epub 2013 Dec 25.

Govoni S., Mura E., Preda S., Racchi M., Lanni C., Grilli M., Zappettini S., Salamone A., Olivero G., Pittaluga A., Marchi M., 2014-
Dangerous liaisons between beta-amyloid and cholinergic neurotransmission
Curr.Pharm.Des, 2014;20(15):2525-38.

Salamone A., Zappettini S., Grilli M., Olivero G., Mura E., Preda S., Govoni S., Marchi M., 2013.
Inhibitory effects of beta amyloid on the nicotinic receptors which stimulate glutamate release from rat hippocampus: the glial contribution.
Eur J Pharmacol. 2013 Nov 23. pii: S0014-2999(13)00858-3.

Pittaluga A., Olivero G., Di Prisco S., Merega E.; Bisio A., Romussi G., Grilli M., Marchi M., 2013.
Effects of the neoclerodane Hardwickiic acid on the presynaptic opioid receptors which modulate noradrenaline and dopamine release in mouse central nervous system
Neurochemistry International, 2013 Mar; 62(4):354-9.

Zappettini S., Grilli M., Olivero G., Mura E., Preda S., Govoni S., Salamone A., Marchi M., 2012.
Beta amyloid differently modulate nicotinic and muscarinic receptor subtypes which regulate in vitro and in vivo the release of glycine in the rat hippocampus
Frontiers in Neuropharmacology, 2012, 27 July 3,146-154

Grilli M., Summa M., Salamone A., Olivero G., Zappettini S., Di Prisco S., Feligioni M., Usai C., Pittaluga A., Marchi M., 2012
In vitro exposure to nicotine induces endocytosis of presynaptic AMPA receptors modulating dopamine release in rat nucleus accumbens nerve terminals.
Neuropharmacology, 2012 Oct 63 (5), pp.916-926.

Marchi M., Zappettini S., Olivero G., Pittaluga A., Grilli M., 2012.
Chronic nicotine exposure selectively activates a carrier-mediated release of endogenous glutamate and aspartate from rat hippocampal synaptosomes.
Neurochem Int. 2012 May;60(6):622-30.

Mura E., Zappettini S., Preda S., Biundo F., C. Lanni, M. Grilli, A. Cavallero, G. Olivero, A. Salamone, S. Govoni and M. Marchi
Dual effect of beta-amyloid on $\alpha 7$ and $\alpha 4\beta 2$ nicotinic receptors controlling the release of glutamate, aspartate and GABA in rat hippocampus
Plos one, Jan 2012, art. no. e29661.

Zappettini S., Mura E., Grilli M., Preda S., Salamone A., Olivero G., Govoni S., Marchi M.
Different presynaptic nicotinic receptor subtypes modulate in vivo and in vitro the release of glycine in the rat hippocampus.
Neurochemistry International. 2011 Oct;59(5):729-38.

ADDITIONAL INFORMATION

Honours, awards and patents

2013

Award from the Italian Society of Pharmacology for the best oral communication: *"In vitro pre-exposure to nicotine: modulation of presynaptic NMDA receptors present on dopaminergic terminals in rat Nucleus Accumbens"* (36° Congresso Nazionale SIF, Torino)

2018

SINS travel grant for the "11th FENS Forum of European Neuroscience"

Membership

SIF (Società Italiana di Farmacologia)

SINS (Società Italiana di Neuroscienze)