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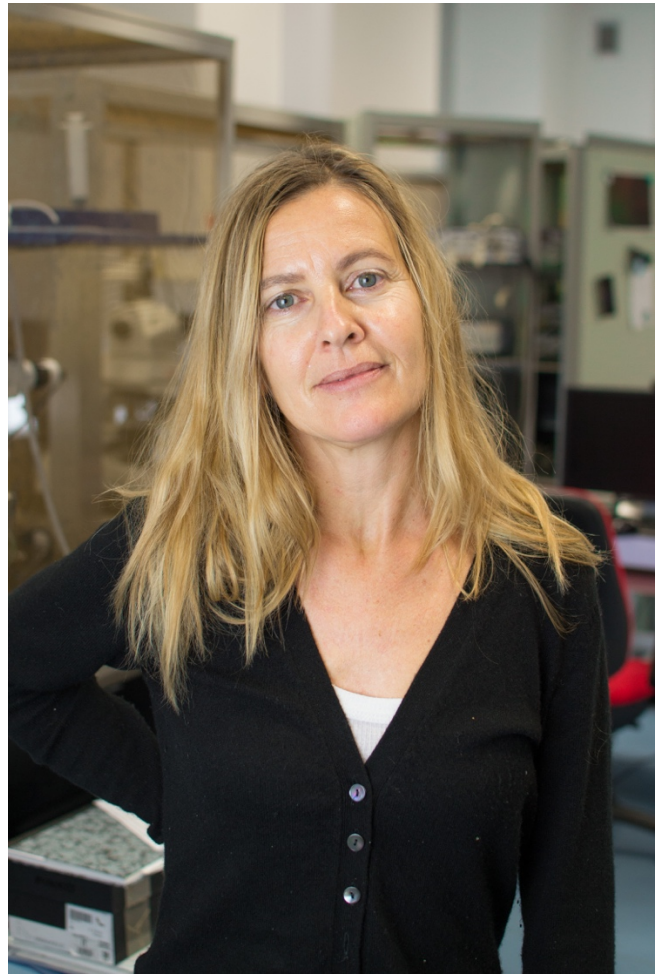
**SILVIA**

**MARINELLI**

**Group Leader**

**Neurons and microglia in the  
physiopathology of cortical microcircuits  
Laboratory**

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Silvia was born in Rome, Italy. She obtained her PhD in Neuroscience at University of Rome Tor Vergata after spending some years at Univ. of Sydney, Australia, where she studied the cellular mechanisms of descending control of pain transmission and gained interest in ion channels involved in pain transmission at brain level.

She then later joined the group of Alberto Bacci at Fondazione EBRI Rita Levi-Montalcini, in Rome. There, she studied and identified specific forms of synaptic plasticity in cerebral cortex microcircuits.

Her group at EBRI, in addition to studying the role of inhibitory synaptic plasticity forms, is looking into the cross-talk between microglia and neurons with the aim of uncovering specific signalling underlying the neuro-immune communication.

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## Education and Positions

1996 BSc Pharmacy, University of Rome "Sapienza", Italy

1999 PhD training in Neuroscience, University of Sydney, Sydney, Australia

2003 PhD, University of Rome "Tor Vergata", Italy

2006 Senior Scientist, Fondazione EBRI-Rita Levi Montalcini, Rome

2012 Group Leader, Fondazione EBRI-Rita Levi Montalcini, Rome

## Publications

### 2019

Vetere G, Borreca A, Pignataro A, Conforto G, Giustizieri M, **Marinelli S**, Ammassari-Teule M. Coincident Pre- and Post-Synaptic Cortical Remodelling Disengages Episodic Memory from Its Original Context. *Mol Neurobiol*. 2019 Jul 2. doi: 10.1007/s12035-019-01652-3.

**Marinelli S**, Basilico B, Marrone MC, Ragozzino D. Microglia-neuron crosstalk: Signaling mechanism and control of synaptic transmission. *Semin Cell Dev Biol*. 2019 May 30. pii: S1084-9521(18)30170-8. doi: 10.1016/j.semcdb.2019.05.017. [IF:6.138](#)

### 2018

Rizzi C, Tiberi A, Giustizieri M, Marrone MC, Gobbo F, Carucci NM, Meli G, Arisi I, D'Onofrio M, **Marinelli S**, Capsoni S and Cattaneo A: NGF steers microglia towards a neuroprotective phenotype

*GLIA* 2018 DOI: 10.1002/glia.23312; [IF:5.846](#)

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Marrone MC, Morabito A, Giustizieri M, Mattioli M, Marinelli S, Riganti L, Lombardi M, Chiurchiù V, Leuti A, Murana E, Totaro A, Piomelli D, Oddi S, Maccarrone M, Ragozzino D, Verderio C and **Marinelli S**: TRPV1 channels are critical brain inflammation detectors and neuropathic pain biomarkers in mice. *Nature Communication* May 10;8:15292. doi: 10.1038/ncomms15292. [IF:13.691](#)

## 2017

Avvisati R, Meringolo M, Stendardo E, Malavasi E, **Marinelli S**, Badiani A. Intravenous self-administration of benzydamine, a non-steroidal anti-inflammatory drug with a central cannabinoidergic mechanism of action. *Addict Biol.* 2017 Apr 21. doi: 10.1111/adb.12516 [IF:5.578](#)

## 2016

Lupascu CA, Morabito A, Merenda E, **Marinelli S**, Marchetti C, Migliore R, Cherubini E, Migliore M. A General Procedure to Study Subcellular Models of Transsynaptic Signaling at Inhibitory Synapses. *Front Neuroinform.* 2016 Jun 30;10:23 [IF:3.074](#)

## 2014

Fezza F, Marrone MC, Avvisati R, Di Tommaso M, Lanuti M, Rapino C, Mercuri NB, Maccarrone M, **Marinelli S**. Distinct modulation of the endocannabinoid system upon kainic acid-induced in vivo seizures and in vitro epileptiform bursting. *Mol Cell Neurosci.* 2014 Sep;62:1-9 [IF: 3.84](#)

Lourenço J, Pacioni S, Rebola N, van Woerden GM, **Marinelli S**, DiGregorio D, Bacci A. Non-associative potentiation of perisomatic inhibition alters the temporal coding of neocortical layer 5 pyramidal neurons. *PLoS Biol.* 2014 Jul 8;12(7):e1001903. [IF:9.343](#)

## 2010

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Manseau F, **Marinelli S**, Schwaller B, Mendez P, Prince DA, Huguenard JR, Bacci A. Desynchronization of neocortical networks by asynchronous release of GABA at autaptic and synaptic contacts from fast-spiking interneurons. *Plos Biology* Vol 8 (9) september 2010 IF:9.343

## 2009

**Marinelli S**, Pacioni S, Cannich A, Marsicano G, Bacci A. (2009). Self-modulation of neocortical glutamatergic neurons by endocannabinoids. *Nature Neurosci* 12:1488-90. Selected from Faculty of 1000 Biology) peer reviewed by Kenneth Mackie: see <http://www.f1000biology.com/article/id/1254959>. IF:14.345(2009) 19.188 (2012-2017), 16.724

## 2008

**Marinelli S**, Pacioni S, Bisogno T, Di Marzo V, Prince DA, Huguenard JR, Bacci A. (2008). The endocannabinoid 2-AG is responsible for the slow self-inhibition in neocortical interneurons. *J Neurosci* 28:13532-13541. IF:6.92

## 2007

**Marinelli S**, Di Marzo V, Florenzano F, Viscomi MT, Fezza F, van der Stelt M, Bernardi G, Molinari M, Maccarrone and Mercuri NB. N-arachidonoyldopamine tunes synaptic transmission onto dopaminergic neurones by activating both cannabinoid and vanilloid receptors. *Neuropsychopharmacology* (2007)32, 298-308 IF:6.54 (2017-2018)

## 2006

Marrone MC, **Marinelli S**, Biamonte F, Keller F, Sgobio CA, Ammassari-Teule M, Bernardi G and Mercuri NB. Altered cortico-striatal synaptic plasticity and related behavioral impairments in reeler mice. *European Journal of Neuroscience* 2006; 24: 2061-2070. IF:6.92

## 2005

**Marinelli S**, Connor M, Schnell SA, Christie MJ, Wessendorf MW, Vaughan CW. Delta-opioid receptor-mediated actions on rostral ventromedial medulla neurons. *Neuroscience*

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2005;132(2):239-44. [IF:3.277](#)

Guatteo E, **Marinelli S**, Geracitano R, Tozzi A, Federici M, Bernardi G, Mercuri NB. Dopamine-containing neurons are silenced by energy deprivation: A Defensive Response or Beginning of Cell Death? *Neurotoxicology*. May 24 (2005). [IF 3.379\(2014\)](#) [3.076 \(2017/2018\)](#)

**MARINELLI S., PASCUCCI T, BERNARDI G, PUGLISI-ALLEGRA S, AND MERCURI NB.** Activation of TRPV1 in the VTA excites dopaminergic neurons and increases chemical- and noxious-induced dopamine release in the nucleus accumbens. *Neuropsychopharmacology* (2005) May;30(5):864-70. [IF:6.544 \(2017-2018\)](#)

## 2004

**Marinelli S**, Schnell SA, Hack SP, Christie MJ, Wessendorf MW and Vaughan CW. Serotonergic and nonserotonergic dorsal raphe neurons are pharmacologically and electrophysiologically heterogeneous. *J Neurophysiol*. 2004 Dec; 92(6):3532-7 [IF:2.887](#)

## 2003

**Marinelli S**, Di Marzo V, Berretta N, Matias I, Maccarrone M, Bernardi G and Mercuri NB: Presynaptic facilitation of glutamatergic synapses to dopaminergic neurons of the rat substantia nigra by endogenous stimulation of vanilloid receptors. *J. Neuroscience* 23(8):3136-3144 (2003) [IF:6.92](#)

## 2002

**Marinelli S**, Schnell S, Vaughan CW, Wessendorf MW, Christie MJ: Rostral ventromedial medulla neurons that project to the spinal cord express multiple opioid receptor phenotypes. *J. Neuroscience*, 22(24): 10847-10855 (2002) [IF:6.92](#)

**Marinelli S**, Vaughan CW, Christie MJ, Connor M: Capsaicin activation of glutamatergic synaptic transmission in the rat locus coeruleus *in vitro*. *J. Physiology* 543, pp. 531-540,2002 [IF:5.037 \(2017-2018\)](#)

## 2001

Vaughan CW, Connor M, Jennings EA, **Marinelli S**, Allen RG, Christie MJ: Actions of nociceptin/orphanin FQ and other prepronociceptin products on rat rostral ventromedial medulla neurons *in vitro*. *J. Physiology* 543(3), pp.849-859, 2001 [IF:5.037](#)

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**Marinelli S**, Federici M, Bernardi G, Mercuri NB: Hypoglycaemia enhances ionotropic but reduced metabotropic glutamate current in rat substantia nigra dopaminergic neurons. *J Neurophysiology* 85, pp.1159-1166, 2001 [IF:2.887](#)

## 2000

**Marinelli S**, Bernardi G, Giacomini P, Mercuri NB: Pharmacological identification of the K<sup>+</sup> currents mediating the hypoglycaemic hyperpolarisation of rat midbrain dopaminergic neurons. *Neuropharmacology*, vol 39 (6), pp. 1021-1028, 2000. [IF:4.249](#)

Mercuri NB, Federici M, **Marinelli S**, Bernardi G: Tranylcypamine, but not moclobenide, prolongs the inhibitory action of dopamine on midbrain dopaminergic neurons: an in vitro electrophysiological study. *Synapse*, 37(3), pp.216-221, 2000 [IF:2.945](#)

**Marinelli S**, Gatta F, Sagratella S: Effect of GYKI 52466 and some 2,3-benzodiazepinederivates on hippocampal in vitro basal neuronal excitability and 4-aminopiridine epileptic activity. *Eur. J. Pharmacol*, 391(1-2), pp75-80, 2000 [IF:3.040](#)

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## 1998

Centonze D, Calabresi P, Pisani A, **Marinelli S**, Marfia GA, Bernardi G: Electrophysiology of neuroprotective agent riluzole on striatal spiny neurons. *Neuropharmacology*, vol 37 (8), pp.1063-1070, 1998. [IF:4.249 \(5 years\)](#)

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## 1997

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## 1996

Domenici MR, **Marinelli S**, Sagratella S: Effects of Felbamate, Kinurenic acid derivates and NMDA antagonists on in vitro kainate-induced epileptiform activity. *Life Sciences*, vol.58, 26 pp. 391-396, 1996 [IF:2.938 \(5 years\)](#)