

Curriculum Vitae

Giuseppe SCIAMANNA, Ph.D.

University Of Rome “TorVergata”
Dept. Of Systems Medicine
Tel +3906501703153
email: g.sciamanna@hsantalucia.it

Education

University of Rome, “TorVergata” – Rome Italy
Ph.D., Neuroscience, 2008.

University of Urbino , Urbino Italy
B.A., Biology, 2004.

Professional experience

Associate researcher, University of Rome TorVergata, 2014-present: Field of study: Pathophysiology of Parkinson in animal model. Role of Rhes protein in Parkinson’s disease and dyskinesia.

Postdoctoral position, Lab of Neurophysiology and Plasticity, Santa Lucia Foundation, Rome, Italy. Supervisor: professor Antonio Pisani, **2009-2014**. Field of study: Pathophysiology of Dystonia and Parkinson in animal model.

Visiting fellowship, Northwestern University, Feinberg School of Medicine, Chicago, USA **November–December 2012**. Supervisor: professor C Savio Chan. Field of study: Optogenetics dissection of basal ganglia circuit.

Visiting fellowship, Center for Interdisciplinary Research in Biology (CIRB), CNRS/INSERM, College de France, Paris, France, **March 2010**. Supervisor: professor L. Venance. Field of study: physiology of astrocytes.

Visiting fellowship, University of Texas at San Antonio, Dept of Biology, Texas USA, supervisor: professor C.J. Wilson, **2008**. Field of study: striatal GABAergic circuit

Graduate researcher, University of Rome, “TorVergata”, Supervisor: professor Antonio Pisani, Rome, Italy, 2005 – 2008. Field of study: Physiology of striatum in normal and pathological condition.

Research interests

Dr. Sciamanna is a neurophysiologist with a strong interest and knowledges in basal ganglia physiology in normal and pathological conditions. Research in animals model of movements disorders, such as dystonia, Parkinson's disease or Huntington's disease represents the most important portion of his scientific background. He has remarkable technical and theoretical skill in electrophysiological recording coupled with fluorometric measurement, in synaptic plasticity of neostriatum and in cellular and molecular mechanisms of neuronal death in course of energy metabolism impairment. He has a growing interest and knowledge in new technical tools as two-photon microscopy and optogenetics approach for in vitro experiments.

Research skills

Patch-clamp recording in whole-cell and perforated patch clamp configuration.
Fluorometric measurement (calcium and sodium imaging) coupled with electrophysiological recording.
Two-photon microscopy
Optogenetics

Software knowledge

pClamp
Microcal Origin
Graphpad Prism
Mathematica
Corel Draw Suite
ImageJ

Honours and Grants

- **3 year grant from Italian Minister of Research, MIUR FIRB 2013**
- **3 year grant from Italian Minister of Health, "Giovani Ricercatori" 2013**
- IBRO student fellowship grants 2008 supporting a research period at University of Texas at San Antonio (USA) department of Biology, under supervision of professor C.J. Wilson.

Publications

1: Sciamanna G, Ponterio G, Tassone A, Maltese M, Madeo G, Martella G, Poli S, Schirinzi T, Bonsi P, Pisani A. Negative allosteric modulation of mGlu5 receptor rescues striatal D2 dopamine receptor dysfunction in rodent models of DYT1 dystonia. *Neuropharmacology*.

2014 Oct;85:440-50. doi: 10.1016/j.neuropharm.2014.06.013. Epub 2014 Jun 19. PMID: 24951854

2: Martella G, Maltese M, Nisticò R, Schirinzi T, Madeo G, **Sciamanna G**, Ponterio G, Tassone A, Mandolesi G, Vanni V, Pignatelli M, Bonsi P, Pisani A. Regional specificity of synaptic plasticity deficits in a knock-in mouse model of DYT1 dystonia. *Neurobiol Dis.* 2014 Feb 3;65C:124-132. doi: 10.1016/j.nbd.2014.01.016. [Epub ahead of print] PubMed PMID: 24503369.

3: Ponterio G, Tassone A, **Sciamanna G**, Riahi E, Vanni V, Bonsi P, Pisani A. Powerful inhibitory action of mu opioid receptors (MOR) on cholinergic interneuron excitability in the dorsal striatum. *Neuropharmacology.* 2013 Dec;75:78-85. doi: 10.1016/j.neuropharm.2013.07.006. Epub 2013 Jul 25. PubMed PMID: 23891638.

4: Puglisi F, Vanni V, Ponterio G, Tassone A, **Sciamanna G**, Bonsi P, Pisani A, Mandolesi G, Torsin A Localization in the Mouse Cerebellar Synaptic Circuitry. *PLoS One.* 2013 Jun 19;8(6):e68063. Print 2013. PubMed PMID: 23840813; PubMed Central PMCID: PMC3686744.

5: **Sciamanna G**, Tassone A, Mandolesi G, Pugliesi F, Ponterio G, Martella G, Madeo G, Bernardi G, Standaert DG, Bonsi P, and Antonio Pisani. Cholinergic Dysfunction Alters Synaptic Integration between Thalamostriatal and Corticostriatal Inputs in DYT1 Dystonia. *J Neurosci.* 2012 Aug 29;32(35):11991-2004.

6: **Sciamanna G**, Hollis R, Ball C, Martella G, Tassone A, Marshall A, Parsons D, Li X, Yokoi F, Zhang L, Li Y, Pisani A, Standaert DG (n.d.) Cholinergic dysregulation produced by selective inactivation of the dystonia-associated protein torsinA. *Neurobiol Dis.* 2012 Sep;47(3):416-27. Epub 2012 May 3.

7: **Sciamanna G**, Wilson CJ; The ionic mechanism of gamma-resonance in rat striatal fast-spiking neurons. *J Neurophysiol.* 2011 Dec;106(6):2936-49. Epub 2011 Aug 31. PMID:21880937

8: **Sciamanna G**, Tassone A, Martella G, Mandolesi G, Puglisi F, Cuomo D, Madeo G, Ponterio G, Standaert DG, Bonsi P, Pisani A. Developmental Profile of the Aberrant Dopamine D2 Receptor Response in Striatal Cholinergic Interneurons in DYT1 Dystonia *PlosONE* 2011;6(9):e24261. Epub 2011 Sep 2. PMID: 21912682

9: **Sciamanna G**, Bonsi P, Tassone A, Cuomo D, Tschertter A, Viscomi MT, Martella G, Sharma N, Bernardi G, Standaert DG, Pisani A. Impaired striatal D2 receptor function leads to enhanced GABA transmission in a mouse model of DYT1 dystonia. *Neurobiol Dis.* 2009 Apr;34(1):133-45 PMID:20227500

10: Bonsi P, **Sciamanna G**, Mitrano DA, Cuomo D, Bernardi G, Platania P, Smith Y, Pisani A. Functional and ultrastructural analysis of group I mGluR in striatal fast-spiking interneurons. *Eur J Neurosci.* 2007 Mar;25(5):1319-31. PMID: 17425558