



## Lucio Marinelli

Researcher

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### *Education and training*

2017

**National scientific habilitation as associate professor in  
neurology**

IT

2011

**Assistant professor in neurology**

University of Genova - Genova - IT

2008

**PhD in Neurophysiology and Neuropharmacology**

University of Genova - Genova - IT

2004

**Specialization in neurology**

University of Genova - Genova - IT

1999

**MD degree**

University of Genova - Genova - IT

### *Academic experience*

2011 - ONGOING

**Assistant professor in neurology**

University of Genova - Genova - IT

### *Work experience*

2012 - ONGOING

**Consultant neurologist clinical neurophysiologist**

Division of Clinical Neurophysiology IRCCS Ospedale Policlinico San Martino  
- Genova - IT

### *Language skills*

**Italian**

Mother tongue

**English**

Proficient

## ***Research interests***

My research interests mainly concern the study of the pathophysiological mechanisms of alterations in muscle tone in stroke survivors, patients with movement disorders, multiple sclerosis and cognitive impairment, using neurophysiological methods that are therefore able to explore the nervous system from a functional point of view. This mainly diagnostic area is accompanied by the interest in identifying and perfecting therapeutic approaches in the treatment of changes in muscle tone and pain in the same type of patients.

Listed below are the main lines of research currently underway:

- 1) Evaluation of the effect of cannabinoids in post-stroke spasticity using neurophysiological methods as primary endpoint. The first double-blind randomized placebo-controlled study to evaluate the effect of THC: transmucosal CBD in the treatment of post-stroke spasticity is ongoing. It is the first worldwide study evaluating the effect of this cannabinoid formulation in post stroke spasticity. An important peculiarity of this study is the use of the stretch reflex as the main method of measuring the effect, in an attempt to adopt an objective and quantitative measure, overcoming the limits of the subjective scales.
- 2) Epidemiological and neurophysiological study on oppositional and facilitory paratonia in patients with cognitive impairment and in the normal elderly population, assessed by means of clinical scales and surface electromyographic recording. Paratonia consists of an inability to keep the limbs relaxed during the assessment of muscle tone and could prove to be a useful measure of cognitive dysfunction, even early, to be compared with current instrumental or biomarker methods.
- 3) Assessment of postural stability and motor learning following disturbances of balance in the normal geriatric population and with various degrees and types of cognitive impairment. The use of a new stabilometric platform able to move the support base allows to evaluate the balance not only in static but also dynamic conditions. The execution of a large battery of neuropsychological tests will allow us to further investigate the correlations between postural stability and cognitive alterations, as well as on the risk of falling.
- 4) Study of the nociceptive pathways through the use of a new electrode capable of selectively stimulating the delta fibers of the skin, in order to evaluate the damage of the nociceptive pathways underlying neuropathic pain by measuring the responses not only as perception (through event-related cortical responses as for laser-evoked potentials) but also by recording directly from the peripheral nerve and therefore allowing to identify the site of injury more precisely. This study will be performed in patients with different types of neuropathy and central pain.
- 5) Experimentation in patients with post-stroke spasticity and multiple sclerosis to treat spasticity by alcoholic nerve block as an alternative to treatment with botulinum toxin.

## ***Editorial activity***

- Performed 101 reviews for many international journals including *Journal of Neurology, Neurosurgery & Psychiatry, Alzheimer's & Dementia, Movement Disorders, Scientific Reports and Plos One*, as reported on Publons profile n. 330476.
- In 2014 invited evaluator for the 'Fonds Wetenschappelijk Onderzoek' (FWO) funding agency
- VQR 2011-2014 evaluator for the CINECA consortium
- In 2013 lead guest editor for Biomed Research International
- Review editor - *Frontiers in Neurology*
- Editorial Board member - *Exploration of Neuroprotective Therapy (Open Exploration)*