



# Ludovico Pedullà

Date of birth: 18/01/1985 | **Nationality:** | **Gender:** 

#### WORK EXPERIENCE

18/03/2019 - CURRENT

### **RESEARCHER - ITALIAN MULTIPLE SCLEROSIS FOUNDATION**

Member of the Scientific Area of the Italian Multiple Sclerosis Foundation.

My research is focused on the study of:

- the basic physio-pathological mechanisms of plasticity in humans;
- the impact of physical exercise and sports activity on behavioural and neural correlates in healthy subjects and in persons with multiple sclerosis;
- the impact of motor and cognitive rehabilitation on behavioural and neural correlates in persons with multiple sclerosis;
- validation of clinical scales for the evaluation of persons with multiple sclerosis;
- development of new protocols and devices for the rehabilitation of people with multiple sclerosis.

Human health and social work activities | www.aism.it | Via Operai, 40, 16149, Genoa, Italy

15/01/2015 - CURRENT

## **UNIVERSITY TEACHING ASSISTANT - UNIVERSITY OF GENOA**

- 2018-present: Information Processing Systems (Bachelor's degree for Physical Therapy)
- 2017-present: Medical Technologies for Clinical Neuroscience (Master degree for Biomedical Engineering)
- 2015-2019: Human Physiology (Bachelor's degree for Biomedical Engineering)

Genoa, Italy

01/03/2017 - 28/02/2019

## POST DOC - DEPARTMENT OF EXPERIMENTAL MEDICINE, UNIVERSITY OF GENOA

Fellowship Grant supported by the Italian MS Foundation on "Behavioural and neural correlates of dual tasks negotiation in ecological setting: an fNIRS study to investigate cognitive-motor interference after rehabilitation in people with multiple sclerosis"

www.dimes.unige.it | Via L. B. Alberti 2, 16132, Genova, Italy

01/01/2014 - 20/04/2017

## PHD STUDENT - DEPARTMENT OF EXPERIMENTAL MEDICINE, UNIVERSITY OF GENOA

Investigating neural plasticity in sensori-motor neurorehabilitation.

www.dimes.unige.it | Via L. B. Alberti 2, 16132, Genoa, Italy

11/06/2012 - 29/11/2013

### **RESEARCHER - ITALIAN MULTIPLE SCLEROSIS ASSOCIATION**

Responsible for the development of a new software for cognitive rehabilitation in people with MS. Collaborator in planning and implementing experimental protocols of motor and cognitive rehabilitation in people with multiple sclerosis.

Via Operai 40, 16149, Genova, Italy

#### PHYSICAL TERAPIST - FONDAZIONE GIOVANNI E OTTAVIA FERRERO

Rehabilitative treatments of orthopedic and neurologic patients.

Via Italia 19, 17047, Vado Ligure (SV), Italy

#### EDUCATION AND TRAINING

01/01/2014 - 20/04/2017 - Genoa, Italy

PH.D. IN NEUROSCIENCE - University of Genoa

Neural plasticity and neurorehabilitation of sensorimotor and cognitive systems in multiple sclerosis EQF level 8

01/11/2011 - 25/10/2013 - Genoa, Italy

MASTER DEGREE IN BIOENGINEERING (FINAL MARK 104/110) - University of Genoa

Scientific, technical and informatic expertise aiming at acquisition and analysis of experimental data in biomedical field.

01/11/2008 - 28/10/2011 - Genoa, Italy

BACHELOR DEGREE IN BIOMEDICAL ENGINEERING (FINAL MARK 95/110) - University of Genoa

Acquisition of informatic, biomechanic, and telecommunications skills Designing, developping, implementing and testing of biomedical devices.

01/10/2004 - 25/11/2007 - Genoa, Italy

**BACHELOR DEGREE IN PHYSICAL THERAPY (FULL MARKS WITH HONORS) –** University of Genoa

Assessment, functional diagnosis and rehabilitative treatment of orthopedic and neurologic patients. Biomechanics and physiologic and pathologic movement analysis. Biomedical data analysis.

01/09/1999 - 25/07/2004 - Genoa, Italy

HIGH SCHOOL DIPLOMA (CLASSICAL STUDIES) - Liceo classico statale Andrea D'Oria

27/08/2002 - 31/05/2003 - Wheeling

**USA HIGH SCHOOL GRADUATION - Wheeling Park High School** 

## LANGUAGE SKILLS

Mother tongue(s): ITALIAN

Other language(s):

|         | UNDERST   | ANDING  | SPEA              | KING               | WRITING |
|---------|-----------|---------|-------------------|--------------------|---------|
|         | Listening | Reading | Spoken production | Spoken interaction |         |
| ENGLISH | C2        | C2      | C1                | C1                 | C2      |
| FRENCH  | B1        | B2      | A2                | A2                 | B1      |

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## HONOURS AND AWARDS

26/11/2021

Best Platform Presentation - RIMS - European network for best practice and research

Award obtained as first author

30/05/2018

Best Poster Young Researchers - Italian Multiple Sclerosis Foundation

Award obtained as first author

02/10/2013

Travel grant to acknowledge the quality of scientific contribution – European Committee for Treatment and Research In Multiple Sclerosis

Award obtained as first author

26/06/2012

Best contribution to basic knowledge and methodologies – Gruppo Nazionale Bioingegneria

Award obtained as co-author

## ORGANISATIONAL SKILLS

Good organizational and leadership skills

## COMMUNICATION AND INTERPERSONAL SKILLS

I establish good relations both at work and in the free time. I am used to teamwork and to opinion sharing

# PATENTS

20/08/2013 - CURRENT

Structured Cognitive Functions Training Kit (Scientific-Clinical App for Android mobile devices) – N° 008950, Ordinativo D008111

Pedullà Ludovico Fondazione Italiana Sclerosi Multipla Via Operai 40 16149 Genova

| Tel:      |  |  |
|-----------|--|--|
| cell: 320 |  |  |
| e-mail:   |  |  |

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 GDPR 679/16. Il sottoscritto è altresì a conoscenza che, ai sensi dell'art. 26 della legge 15/68, le dichiarazioni mendaci, la falsità negli atti e l'uso di atti falsi sono puniti ai sensi del codice penale e delle leggi speciali.

Genova, 10/07/2023

In fede,

Ludovico Pedullà

cell: e-mail:

## SCIENTIFIC CURRICULUM

# List of publications on international journals with peer-review

# 2023

- Triantafyllidis A, Segkouli S, Zygouris S, Michailidou C, Avgerinakis K, Fappa E,
  Vassiliades S, Bougea A, Papagiannakis N, Katakis I, Mathioudis E, Sorici A, Bajenaru L,
  Tageo V, Camonita F, Magga-Nteve C, Vrochidis S, Pedullà L, Brichetto G, Tsakanikas P,
  Votis K, Tzovaras D. Mobile App Interventions for Parkinson's Disease, Multiple Sclerosis
  and Stroke: A Systematic Literature Review. Sensors (Basel). 2023 Mar 23;23(7):3396.
- **Pedullà L**, Santoyo-Medina C, Novotna K, Moumdjian L, Smedal T, Arntzen EC, van der Linden ML, Learmonth Y, Kalron A, Güngör F, Nedeljkovic U, Kos D, Jonsdottir J, Coote S, Tacchino A. Physical Activity in Multiple Sclerosis: Meeting the Guidelines at the Time of the COVID-19 Pandemic. J Neurol Phys Ther. 2023 Apr 1;47(2):112-121.
- Tacchino A, Podda J, Bergamaschi V, **Pedullà L**, Brichetto G. Cognitive rehabilitation in multiple sclerosis: Three digital ingredients to address current and future priorities. Front Hum Neurosci. 2023 Feb 23;17:1130231.
- Jonsdottir J, Santoyo-Medina C, Kahraman T, Kalron A, Rasova K, Moumdjian L, Coote S, Tacchino A, Grange E, Smedal T, Arntzen EC, Learmonth Y, Pedulla L, Quinn G, Kos D. Changes in physiotherapy services and use of technology for people with multiple sclerosis during the COVID-19 pandemic. Mult Scler Relat Disord. 2023 Mar;71:104520.

- Moumdjian L, Smedal T, Arntzen EC, van der Linden ML, Learmonth Y, Pedullà L, Tacchino A, Novotna K, Kalron A, Yazgan YZ, Nedeljkovic U, Kos D, Jonsdottir J, Santoyo-Medina C, Coote S. Impact of the COVID-19 Pandemic on Physical Activity and Associated Technology Use in Persons With Multiple Sclerosis: An International RIMS-SIG Mobility Survey Study. Arch Phys Med Rehabil. 2022 Oct;103(10):2009-2015.
- Podda J, Uccelli MM, Tacchino A, **Pedullà L**, Bragadin MM, Battaglia MA, Brichetto G, Ponzio M. Predictors of Mood Disorders in Parents With Multiple Sclerosis: The Role of Disability Level, Coping Techniques, and Perceived Social Support. Int J MS Care. 2022 Sep-Oct;24(5):224-229.
- Kahraman T, Rasova K, Jonsdottir J, Medina CS, Kos D, Coote S, Tacchino A, Smedal T, Arntzen EC, Quinn G, Learmonth Y, Pedulla L, Moumdjian L, Kalron A. The impact of the COVID-19 pandemic on physical therapy practice for people with multiple sclerosis: A multicenter survey study of the RIMS network. Mult Scler Relat Disord. 2022 Jun;62:103799.

- Correale L, Martinis L, Tavazzi E, Pedullà L, Mallucci G, Brichetto G, Bove M, Ponzio M, Borrelli P, Monti MC, Bergamaschi R, Montomoli C. Barriers to exercise and the role of general practitioner: A cross-sectional survey among people with multiple sclerosis. Front Neurol. 2022 Nov 21;13:1016143.
- Podda J, Tacchino A, **Pedullà L**, Monti Bragadin M, Battaglia MA, Brichetto G, Ponzio M. Mind wandering in people with Multiple Sclerosis: A psychometric study. Mult Scler Relat Disord. 2022 Feb;58:103521. doi: 10.1016/j.msard.2022.103521.

- Zuber P, Gaetano L, Griffa A, Huerbin M, **Pedullà L**, Bonzano L, Altermatt A, Tsagkas C, Parmar K, Hagmann P, Wuerfel J, Kappos L, Sprenger T, Sporns O, Magon S. Additive and interaction effects of working memory and motor sequence training on brain functional connectivity. Sci Rep. 2021 Nov 29;11(1):23089.
- Bonzano L, Bisio A, **Pedullà L**, Brichetto G, Bove M. Right Inferior Parietal Lobule Activity Is Associated With Handwriting Spontaneous Tempo. Front Neurosci. 2021 Jun 9;15:656856.
- Bortoletto M, Bonzano L, Zazio A, Ferrari C, **Pedullà L**, Gasparotti R, Miniussi C, Bove M. Asymmetric transcallosal conduction delay leads to finer bimanual coordination. Brain Stimul. 2021 Mar-Apr;14(2):379-388.
- Podda J, Ponzio M, **Pedullà L**, Monti Bragadin M, Battaglia MA, Zaratin P, Brichetto G, Tacchino A. Predominant cognitive phenotypes in multiple sclerosis: Insights from patient-centered outcomes. Mult Scler Relat Disord. 2021 Mar 21;51:102919.

- Prada V, Tacchino A, Podda J, **Pedullà L**, Konrad G, Battaglia MA, Brichetto G, Monti Bragadin M. Mam36 and Abilhand as outcome measures of multiple sclerosis hand disability: an observational study. Eur J Phys Rehabil Med. 2020 Dec 11.
- Podda J, Tacchino A, **Pedullà L**, Monti Bragadin M, Battaglia MA, Brichetto G. Focus on neglected features of cognitive rehabilitation in MS: Setting and mode of the treatment. Mult Scler. 2020 Oct 13:1352458520966300.
- Podda J, Ponzio M, Messmer Uccelli M, **Pedullà L**, Bozzoli F, Molinari F, Monti Bragadin M, Battaglia MA, Zaratin P, Brichetto G, Tacchino A. Predictors of clinically significant anxiety in people with multiple sclerosis: A one-year follow-up study [published online ahead of print, 2020 Jul 22]. Mult Scler Relat Disord.
- Pedullà L, Tacchino A, Podda J, Bragadin MM, Bonzano L, Battaglia MA, Bove M, Brichetto G, Ponzio M. The patients' perspective on the perceived difficulties of dual-tasking: development and validation of the Dual-task Impact on Daily-living Activities Questionnaire (DIDA-Q). Mult Scler Relat Disord. 2020 Nov;46:102601
- **Pedullà L**, Gervasoni E, Bisio A, Biggio M, Ruggeri P, Avanzino A, Bove M. The last chance to pass the ball: investigating the role of temporal expectation and motor resonance in processing temporal errors in motor actions. Soc Cogn Affect Neurosci. 2020 Jan 30;15(1):123-134.
- Podda J, **Pedullà L**, Monti Bragadin M, Piccardo E, Battaglia MA, Brichetto G, Bove M, Tacchino A. Spatial constraints and cognitive fatigue affect motor imagery of walking in people with multiple sclerosis. Sci Rep. 2020 Dec 14;10(1):21938.

- Tacchino A, Ponzio M, **Pedullà L**, et al. Italian validation of the Arm Function in Multiple Sclerosis Questionnaire (AMSQ). Neurol Sci. 2020 Nov;41(11):3273-3281.
- Canepa P\*, **Pedullà L\***, Bisio A, Ruggeri P, Bove M. Is the 12 minute-walk/run test a predictive index of cognitive fitness in young healthy individuals? A pilot study on aerobic capacity and working memory in a real-life scenario. Neurosci Lett. 2020;728:134983.
- Brichetto G, Monti Bragadin M, Fiorini S, Battaglia MA, Konrad G, Ponzio M, Pedullà L, Verri A, Barla A, Tacchino A. The hidden information in patient-reported outcomes and clinician-assessed outcomes: multiple sclerosis as a proof of concept of a machine learning approach. Neurol Sci. 2020;41(2):459–462

- Brichetto G, **Pedullà L**, Podda J, Tacchino J. Beyond center-based testing: Understanding and improving functioning with wearable technology in MS. Mult Scler. 2019;25(10):1402–1411.
- Bonzano L, **Pedullà L**, Tacchino A, Brichetto G, Battaglia MA, Mancardi GL, Bove M. Upper limb motor training based on task-oriented exercises induces functional brain reorganization in patients with multiple sclerosis. Neurosci. 2019;410:150-159.

## 2018

- Bonzano L\*, **Pedullà L**\*, Pardini M, Tacchino A, Zaratin P, Battaglia MA, Brichetto G, Bove M. Brain activity pattern changes after adaptive working memory training in multiple sclerosis. Brain imaging behav. 2018;Oct30:1-13.
- Crivelli D\*, **Pedullà L**\*, Bisio A, Rueda S, Brichetto G, Bove M, Balconi M. When "Extraneous" Becomes "Mine". Neurophysiological Evidence of Sensorimotor Integration During Observation of Suboptimal Movement Patterns Performed by People with Multiple Sclerosis. Neurosci. 2018;386:326-338.

# 2017

• Bisio A, **Pedullà L**, Bonzano L, Tacchino A, Brichetto G, Bove M. The kinematics of handwriting movements as expression of cognitive and sensorimotor impairments in people with multiple sclerosis. Sci Rep. 2017;7(1):17730.

# 2016

- Bisio A, **Pedullà L**, Bonzano L, Ruggeri P, Brichetto G, Bove M. Evaluation of Handwriting Movement Kinematics: From an Ecological to a Magnetic Resonance Environment. Front Hum Neurosci. 2016;10:488.
- **Pedullà L**, Brichetto G, Tacchino A, Vassallo C, Zaratin P, Battaglia MA, Bonzano L, Bove M. Adaptive vs. non-adaptive cognitive training by means of a personalized App: a randomized trial in people with multiple sclerosis. J Neuroeng Rehabil. 2016;13(1):88.

- Tacchino A\*, **Pedullà L\***, Bonzano L, Vassallo C, Battaglia MA, Mancardi G, Bove M, Brichetto G. A New App for At-Home Cognitive Training: Description and Pilot Testing on Patients with Multiple Sclerosis. JMIR Mhealth Uhealth. 2015;3(3):e85.
- Brichetto G, Piccardo E, **Pedullà L**, Battaglia MA, Tacchino A. Tailored balance exercises on people with multiple sclerosis: A pilot randomized, controlled study. Mult Scler. 2015;21(8):1055-63.

• Tacchino A, Bove M, **Pedullà L**, Battaglia MA, Papaxanthis C, Brichetto G. Imagined actions in multiple sclerosis patients: evidence of decline in motor cognitive prediction. Exp Brain Res. 2013;229(4):561-70.

# Posters and oral presentations

# 2023

- **Pedullà L**, Biggio M, Tacchino A, Iester C, Brichetto G, Bellosta A, Bisio A, Bonzano L, Bove M. Innovative techniques for monitoring and enhancing the effects of rehabilitation in people with advanced multiple sclerosis. RIMS 2023, Genova, Italy
- Pedullà L, Carrea L, Tacchino A, Prada V, Monti Bragadin M, Podda J, Bergamaschi V, Bellosta A, Brichetto G, Bonzano L, Bove M. Accessibility, inclusion and expertise of sports facilities in Genoa, Italy: a co-designed survey and census to promote physical activity among people with multiple sclerosis. Special Interest Group Mobility 2022, RIMS network, Bilbao, Spain

## 2022

- **Pedullà L**, Traverso G, Paolucci R, Monti Bragadin M, Zaratin P, Brichetto G. Sviluppo di un sistema di monitoraggio non invasivo per prevedere il rischio di ricaduta nella sclerosi multipla: valorizzare il contributo dei pazienti tramite il metodo MULTI-ACT. SIRN 2022, Napoli, Italy.
- **Pedullà L**, Carrea L, Isolabella L, Podda J, Correale L, Battaglia MA, Konrad G, Brichetto G, Tacchino A. Testing feasibility and acceptance of a remotely-supported physical activity intervention in people with multiple sclerosis. Special Interest Group Mobility 2022, RIMS network, Amsterdam, The Netherlands.

## 2021

- **Pedullà L**, Tacchino A, Podda J, Monti Bragadin M, Battaglia MA, Konrad G, Brichetto G. Co-creation of a telerehabilitation intervention for people with MS: a shared-decision approach to increase engagement and empowerment. Special Interest Group Mobility 2021, RIMS network, virtual edition.
- **Pedullà L**, Bozzoli F, Molinari F, Podda J, Falautano M, Confalonieri P, Korn D, Battaglia MA, Ponzio M, Brichetto G, Zaratin P. Co-creating new patient-reported outcomes through the science with and of patient input: characterization of mood status in people with multiple sclerosis. ECTRIMS 2021, virtual edition.
- **Pedullà L**, Bozzoli F, Molinari F, Podda J, Falautano M, Confalonieri P, Korn D, Battaglia MA, Graffigna G, Ponzio M, Brichetto G, Zaratin P. How to measure the impact of mood on people with MS' daily life? A multi-stakeholder approach to co-create a new patient reported outcome. RIMS, virtual edition

- **Pedullà L**, Bonzano L, Bisio A, Job M, Tacchino A, Brichetto G, Bove M. Cognitive-motor Interference in People with Multiple Sclerosis: the Influence of Curvilinear Walking and Fatigue. 10th International Symposium on Gait and Balance in Multiple Sclerosis, virtual.
- **Pedullà L**, Rinaldi S, Addeo S, Cooper J, Chiossi M, Bellosta A, Battaglia MA, Monti Bragadin M, Podda J, Tacchino A, Brichetto G, Konrad G.. Aerobic training in multiple

- sclerosis: a pilot study on the effects of group treatment with mini-trampolines. RIMS 2020, Leuven, Belgio.
- **Pedullà L**, Addeo S, Rinaldi S, Chiossi M, Bellosta A, Battaglia MA, Monti Bragadin M, Podda J, Tacchino A, Brichetto G, Konrad G. Aerobic training in multiple sclerosis: a pilot study on the effects of music during group treatment. RIMS 2020, Leuven, Belgio.

- **Pedullà L**, Bonzano L, Bisio A, Job M, Tacchino A, Podda J, Brichetto G, Bove M. Neural correlates of cognitive-motor dual tasks in multiple sclerosis: an fNRIS study. ECTRIMS 2019, Stockholm, Sweden.
- **Pedullà L**, Bove M, Bergamaschi R, Correale L, Brichetto G. Ride the wave: an explorative investigation on the perspective of people with multiple sclerosis about sports activity. RIMS 2019, Lubiana, Slovenia.
- **Pedullà L**, Bonzano L, Bisio A, Job M, Tacchino A, Brichetto G, Bove M. Effects of curvilinear walking and cognitive-motor dual tasks on motor performance and cortical activity in people with multiple sclerosis. RIMS 2019, Lubiana, Slovenia.
- **Pedullà L**, Bisio A, Biggio M, Parodi F, Travali A, Cesaroni G, Tacchino A, Brichetto G, Bove M. Investigating and enhancing the effect of rehabilitation in real life with a new sensorized prosthetic aid: a study in people with multiple sclerosis. Workshop "Innovation In Rehabilitation Technologies" 2019, Genoa, Italy.

## 2018

- **Pedullà L**, Bisio A, Bonzano L, Dessypris A, Faelli E, et al. Aerobic training as substrate for neural plastic changes in multiple sclerosis. RIMS 2018, Amsterdam, Netherland.
- **Pedullà L**, Ponzio M, Tacchino A, Battaglia MA, Bove M, Brichetto G. Development and validation of the "Dual-task Impact on Daily-life Activities Questionnaire": preliminary evaluation in people with multiple sclerosis. RIMS 2018, Amsterdam, Netherland
- **Pedullà L**, Bonzano L, Bisio A, Job M, Brichetto G, Bove M. Neural correlates of dual task cost in ecological settings: preliminary results in healthy subjects of an fNIRS study. RIMS "Special Interest Group mobility", Glasgow, UK.
- **Pedullà L**, Bisio A, Bonzano L, Canepa P, Adascalitei S, Brichetto G, Bove M. Cognitive cost and brain activity during dual tasks: an fNRIS study in young adults. SISMeS 2018, Messina, Italy

## 2017

- **Pedullà L**, Bisio A, Bonzano L, Tacchino A, Bove M, Brichetto G. Developing an integrated core set for the evaluation of handwriting movement in people with multiple sclerosis. RIMS 2017, Barcelona, Spain.
- **Pedullà L**, Brichetto G, Tacchino A, Bonzano L, Bove M. Adaptive working memory training improves cognitive performance and affects brain functional reorganization in people with multiple sclerosis. RehabWeek 2017, London, UK.

# <u>2016</u>

• **Pedullà L**, Bisio A, Bonzano L, Tacchino A, Brichetto G, Bove M. Integrated assessment of handwriting movement in people with multiple sclerosis. ECTRIMS-RIMS 2016, London, UK.

- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Brichetto G. Adaptive vs non-adaptive cognitive rehabilitation training based on working memory: effects on people with multiple sclerosis. RIMS 2015, Milano, Italy
- **Pedullà L**, Bisio A, Avanzino L, Tacchino A, Brichetto G, Bove M. Corticospinal excitability during action observation is affected by the fluency of the observed movement. Neuroscience SfN 2015, Chicago, USA.

### 2014

- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Brichetto G. Riabilitazione cognitiva nella sclerosi multipla: un trattamento personalizzato intensivo a domicilio tramite un'Applicazione per tablet non commerciale. Congresso Nazionale della Società Italiana di Riabilitazione Neurologica SIRN 2014, Genova, Italy.
- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Brichetto G. Homebased personalized cognitive training with a customized tablet application in people with multiple sclerosis. Rehabilitation in Multiple Sclerosis RIMS 2014, Brighton, UK.
- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Brichetto G. A new tool for personalized at-home intensive cognitive rehabilitation. Gruppo Nazionale di Bioingegneria GNB 2014, Pavia, Italy.

## 2013

• L. Pedullà, E. Piccardo, M.A. Battaglia, A. Tacchino, G. Brichetto. Tailored balance exercises for people with multiple sclerosis: a pilot randomized controlled study. ECTRIMS/RIMS 2013, Copenhagen, Denmark.

## Awards

# 2021

• Best platform presentations, RIMS congress, virtual edition

## 2018

• Best Poster Young Researchers, Scientific Congress of Italian Multiple Sclerosis Foundation, Rome, Italy.

## 2013

• Travel grant to acknowledge the quality of scientific contribution to the ECTRIMS/RIMS congress, Copenhagen, Denmark.