



NeuroMi 2017

International Symposium Personalised Medicine in Multiple Sclerosis

13-15 September 2017

Università di Milano-Bicocca, Milan

Programme

Evento ECM - n. 1386 -197343 - Crediti 10,5





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Recent epidemiologic studies indicate that Multiple Sclerosis (MS) affects 113 persons every 100,000 Italians, leading to a total of approximately 68,000 patients and 1,800 new cases per year in Italy.

Advance in diagnosis and therapy has been impressive during the last decade and the possibility to "tailor" the treatment on the individual features of each patient is becoming real.

As a matter of fact, personalised treatment would be highly desirable in MS because it is an immensely heterogeneous disease, both in terms of clinical course and treatment responses.

Currently, a combination of clinical features and imaging parameters in magnetic resonance imaging is used to classify active and non-active patients, while no universally accepted, clear-cut indicators are available to identify treatment responders and non-responders and reliable biomarkers are needed to provide better indicators for prognosis and treatment response.

This Symposium will highlight the frontline results in some of the "hot topics" in the modern management of MS, including better knowledge on still neglected aspects of its pathogenesis, the effectiveness of physical, non-pharmacological treatments and the possibility to exploit emerging techniques and big-data analysis to improve diagnosis and allow personalised management.

Guido Cavaletti

Symposium President

This is the third international meeting of the Milan Center for Neuroscience (www.neuromi.it), founded in 2014 by the University of Milano-Bicocca, which gathers now more than 300 neuroscientists from the Milan area. The mission of the Milan Center for Neuroscience is to promote high-level multidisciplinary research and education in the field of Neuroscience, to uncover mechanisms of nervous system function and dysfunction at different ages. With this aim, it fosters collaborations among clinical, molecular, cognitive, imaging, computational and biotechnological fields.

Previous international meetings have been "Imaging of the brain" and "Prediction and prevention of dementia: new hope", with a similar top level international and interdisciplinary approach.



Wednesday 13 September 2017

1.30 pm	Registration
3.30 pm	Welcome Cristina Messa, Maria Grazia Valsecchi, Guido Cavaletti (Milan, I)
4.00 pm	Role and activities of NeuroMI Carlo Ferrarese (Milan, I)
	MS: the personalised approach
	Chairs Giancarlo Comi - Alessandro Vercelli
4.30 pm	Precision medicine in MS Tobias Derfuss (Basel, CH)
5.30 pm	Big data to personalise MS management Paul M. Matthews (London, UK)
6.30 pm	The Italian MS Registry Maria Trojano (Bari, I)
7.00 pm	Patient-centered outcome measures Giampaolo Brichetto (Genoa, I)
7.30 pm	The challenge of progressive multiple sclerosis Giancarlo Comi (Milan, I)

8.00 pm Welcome cocktail



Thursday 14 September 2017

New Concepts in the immunology of MS

Chairs Antonio Uccelli - Diego Centonze

9.00 am	Innate immunity in MS Maria Foti (Milan, I)
9.30 am	Innate immunity and remyelination Robin J. Franklin (Cambridge, UK)
10.30 am	Coffee break
11.00 am	The role of B-cells in MS Veerle Somers (Hasselt, B)
12.00 am	Exercise and immunity Eric J. Downer (Dublin, IRL)
1.00 pm	Lunch and posters viewing

Advanced Neuroimaging in MS

Chairs Giampaolo Basso - Giberto Chirico

2.30 pm	New imaging techiniques for MS Rosa Maria Moresco (Milan, I)
3.00 pm	Molecular imaging in MS Juha Rinne (Turku, F)
4.00 pm	Coffee break
4.30 pm	Roundtable "Human Technopole" in the era of personalised medicine University and IRCCS representatives



Thursday 14 September 2017

The challenge of new treatments and reproduction

Chairs Rodolfo Milani - Alessandra Protti

6.00 pm	How to preserve individual reproductive capacity <i>Robert Fruscio (Milan, I)</i>
6.30 pm	MS and reproduction Kerstin Hellwig (Bochum, D)

Friday 15 September 2017

Oral Communications

Chairs Carlo Ferrarese - Eraldo Paulesu

9.00 am A correlation between EBV infection and HLA distribution in multiple sclerosis

<u>Agostini S¹,</u> Guerini FR¹, Mancuso R¹, Zanzottera M,¹ Hernis A¹, Liuzzo G¹, Rovaris M², Clerici M^{1,3}

1. Laboratory of Molecular Medicine and Biotechnologies, Don Carlo Gnocchi Foundation – ONLUS IRCCS, Milan, Italy; 2. Multiple Sclerosis Center, Don Carlo Gnocchi Foundation – ONLUS IRCCS, Milan, Italy; 3. Department of Physiopathology and Transplantation, University of Milan, Milan, Italy

9.15 am Development of a remote delivery self-management program for people with secondary progressive multiple sclerosis

Cross C¹, Cooke D¹, Kidd T¹, Embrey N², Sterr A¹, Brown D,¹ Carey N¹

1. University of Surrey, Guildford, UK; 2. Royal Stoke University Hospital, University Hospitals of North Midlands NHS Trust, UK



9.30 am Application of MRI and OCT techniques to detect axonal loss in MS. A pilot study

<u>Cogo MG¹</u>, Patassini M², Suzani M³, Morzenti S⁴, Cammaroto V⁵, Cereda D¹, Grimoldi M¹, Balducci C¹, Cutellè C¹, Fusco ML¹, Frigo M¹

1. Department of Neurology, San Gerardo Hospital and University of Milano-Bicocca, Monza, Italy; 2. Department of Neuroradiology, San Gerardo Hospital and University of Milano-Bicocca, Monza, Italy: 3. Department of Ophthalmology, San Gerardo Hospital and University of Milano-Bicocca, Monza, Italy; 4. Department of Health Physics, San Gerardo Hospital and University of Milano-Bicocca, Monza, Italy; 5. Department of Neuroscience and Biomedical Technology, San Gerardo Hospital and University of Milano-Bicocca, Monza, Italy

9.45 am Medicine 4.0: new approaches to personalized training programs for chronic patients

Pinardi S¹, Di Coste F², La Pietra G³

1,3. Educational Factory srl, Milan, Italy; 2. Associazione Italiana Health Coaching, Rome, Italy

10.00 am Development of a PCR-free approach for the detection of multiple miRNAs related to MS: results from the "NanoPlasmiRNA" ERA-NET project

<u>Vanna R¹</u>, Abols A⁴, Sguassero A¹, Morasso C¹, Artiga Folch A⁵, Hernis A², Ramirez Jimenez R⁴, Mancuso R², Agostini S², Picciolini S¹, Gualerzi A¹, Bedoni M¹, de la Fuente J M⁵, Gramatica F¹, Line A⁴and Rovaris M³

1. Laboratory of Nanomedicine and Clinical Biophotonics (LABION); 2. Laboratory of Molecular Medicine and Biotechnologies; 3. Multiple Sclerosis Unit; IRCCS Fondazione Don Carlo Gnocchi ONLUS, Milan, Italy; 4. Latvian Biomedical Research and Study Centre, Riga, Latvia; 5. Instituto de Ciencia de Materiales de Aragon, CSIC/University of Zaragoza, Spain



10.15 am Tracking the effect of cathodal direct current stimulation on cortical excitability and connectivity by the use of TMS-EEG

<u>Varoli E³</u>, Romero L J^{1,2}, Pisoni A^{1,2}, Mattavelli G^{1,2}, Rosanova M^{4,5}, Bolognini N^{1,2}, Vallar G^{1,2}

1. Department of Psychology, University of Milano-Bicocca, Milan, Italy; 2. NeuroMi – Milan Center of Neuroscience, Milan, Italy; 3. Department of Medicine and Surgery, University of Milano-Bicocca, Milan, Italy; 4. Department of Biomedical and Clinical Sciences "L.Sacco", University of Milano, Milan, Italy; 5. Fondazione Europea di Ricerca Biomedica FERB Onlus, Milan, Italy

10.30 am CSF β-amyloid as a putative biomarker of disease progression in multiple sclerosis

Pietroboni AM¹, <u>Caprioli M</u>¹, Scarioni M¹, Fenoglio C¹, Spanò B², Arighi A¹, Cioffi SM¹, Oldoni E¹, De Riz MA¹, Basilico P¹, Calvi A¹, Fumagalli GG¹, Triulzi F¹, Bozzali M², Galimberti D¹, Scarpini E¹

1. University of Milan, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy; 2. IRCCS Santa Lucia Foundation, Rome, Italy

10.45 am	Coffee break

New frontiers of biological research in MS (I)

Chairs Guido Cavaletti - Renato Mantegazza

11.15 am	The therapeutic role of stem cells in MS Gianvito Martino (Milan, I)
11.15 am	Gianvito Martino (Milan, I)



	Oral Communications
12.10 am	High-resolution vessel neuroimaging of rat spinal cords using X-ray phase contrast CT <u>Barbone G¹</u> , Ceresa C ^{2,3} , Monfrini M ^{2,3} , Eckermann M ¹ , Chiorazzi A ^{2,3} , Canta A ^{2,3} , Bossi M ^{2,3} , Mittone A ⁴ ,
	Bravin A ⁴ , Cavaletti G ^{2,3} , Coan P ^{4,5} 1. Department of Physics, Ludwig Maximilians University, Munich, Germany; 2. School of Surgery and Medicine, University of Milano-Bicocca, Monza, Italy; 3. Milan Center for Neuroscience, Milan, Italy; 4. ID17, European Synchro- tron Radiation Facility, Grenoble, France; 5. Dept. Clinical Radiology and Dept. Physics, Ludwig Maximilians Universi- ty, Munich, Germany
12.25 am	Neuroactive steroids in a MS model: bi-directional interaction in disease progression
	<u>Giatti S</u> ¹, Rigolio R², Diviccaro S¹, Pesaresi M¹, Spezzano R¹, Caruso D¹, Cavaletti G² and Melcangi RC¹
	 Department of Pharmacological and Biomolecular Sciences, Università degli Studi di Milano, Milan, Italy; 2. Department Surgery and Translational Medicine, Universi- tà degli Studi Milano-Bicocca, Monza, Italy
12.40 am	Size and specimen-dependent strategy for X-Ray micro-CT and TEM correlative analysis of nervous system samples
	Rigolio R¹, <u>Parlanti P²</u> ³, Cavaletti G¹, Gemmi M³, Cappello V³
	1. Dipartimento di Medicina e Chirurgia, Experimental Neurology Unit, NEUROMI , Università degli Studi di Milano-Bicocca, Monza, Italy; 2. NEST, Scuola Normale Superiore, Pisa, Italy; 3. Centre for Nanotechnology Innova- tion@ NEST, Istituto Italiano di Tecnologia, Italy
12.55 am	Mesenchymal stem cells: a promising approach for the treatment of multiple sclerosis
	<u>Scuteri A</u> ¹, Donzelli E¹, Rigolio R¹, Ballarini E¹, Monfrini M¹, Chiorazzi A¹, Meregalli C¹, Cavaletti G¹
	1. School of Medicine and Surgery, University of Milan-Bicocca, Monza, Italy



1.10 pm Lunch and poster viewing

New frontiers of biological research in MS (II)

Chairs Fulvio Magni - Marina Pitto

2.00 pm	Genetics and genomic in MS Hanne Flinstad Harbo (Oslo, N)
2.45 pm	The role of extracellular vesicles in MS David Otaegui Bichot (Donostia, E)
3.30 pm	Ionic homeostasis and metabolic disturbances in MS using MRI Jean-Philippe Ranjeva (Marseille, F)
4.15 pm	Take-home messages and greetings Guido Cavaletti (Milan, I)

Poster Exhibition

P01 Personalized photo-thermally active gold nanoparticle surfaces. Novel opportunities for "smart" patches

<u>Borzenkov M</u>, Chirico G, Collini M Nanomedicine Center, University of Milano-Bicocca Milan, Italy

P02 Theory of mind in high-functioning patients with relapsing-remitting multiple sclerosis

<u>Cammaroto V^{1,2}</u>, Fusco ML², Cogo MG², Traficante D^{1,2}, Frigo M², and Isella V¹

1. Neuropsychology Section and 2. Neuroimmunology Center, Department of Neurology, S. Gerardo Hospital, Monza, University of Milano-Bicocca, Italy



Poster Exhibition

P03 Barriers and facilitators in care coordination for people with multiple sclerosis: a systematic review

 $\label{eq:carey_N} \frac{Carey\ N^1}{Embrey\ N^3}, Westwood\ S^2, Cooke\ D^1, Peacock\ M^1, Cross\ C^1, \\ \overline{Embrey\ N^3}, Mold\ F^1$

1. University of Surrey, Guildford, UK; 2. Keele University, Stafford, UK; 3. Royal Stoke University Hospital, University Hospitals of North Midlands NHS Trust, UK

P04 A systematic review of the effectiveness of self-management interventions in people with multiple sclerosis at improving depression, anxiety and quality of life

Kidd T¹, <u>Carey, N¹</u>, Mold F¹, Westwood S², Miklaucich M¹, Konstantara E¹, Sterr A¹, Cooke, D¹

1. University of Surrey, Guildford, UK; 2. Keele University, Stafford, UK

P05 Benign multiple sclerosis: assessment of main prognostic factors and long-term disability acknowledgments

<u>Cereda D</u>¹, Balducci C¹, Cogo MG¹, Cutellè C¹, Frigo M¹, Grimoldi M¹, Trotta G¹, Fusco ML¹

1. Milan Center for Neuroscience, University of Milano-Bicocca, Department of Neurology, S. Gerardo Hospital, Monza, Italy

P06 Early diagnosis of pml: results from the Italian cohort

1. Multiple Sclerosis Centre, Spedali Civili di Brescia, Montichiari, Brescia, Italy; 2. Department of Neurology and Psychiatry, Sapienza University, Rome, Italy; 3. Department of Translational Research and of New Surgical and Medical Technologies, University of Pisa, Pisa, Italy; 4. Department of Neuroradiology, San Raffaele Scientific Institute, Vita-Salute San Raffaele University, Milan, Italy



Poster Exhibition

P07 Role of comorbidity in multiple sclerosis: prevalence in a single center

<u>Frigeni B</u>¹, Barcella V¹, La Gioia S¹, Gardinetti M¹, Conti MZ¹, Vedovello M¹, Zanchi C¹, Rottoli MR¹

1. Centro Sclerosi Multipla, USS Neuroimmunologia, ASST Papa Giovanni XXII Bergamo, Italy

P08 Diagnostic pitfalls in rare neurological diseases: the TTR FAP (transthyretin familial amyloid polyneuropathy) case

Pareyson D¹

1. Dipartimento Neuroscienze Cliniche – Malattie Neurologiche Rare dell'Adulto – Fondazione IRCCS, Istituto Neurologico "C. Besta", Milan, Italy

P09 Isolation and characterization of neutrophils from multiple sclerosis patients

<u>Rigolio R^{1,2,3}</u>, Fusco ML⁴, Malacrida A^{1,2,3}, Cogo M⁴, Avezza F^{1,2}, Foti M¹, Cavaletti G^{1,2,3,4}

1. Dipartimento di Medicina e Chirurgia, Università degli Studi di Milano-Bicocca, Monza, Italy; 2. Experimental Neurology Unit, Dipartimento di Medicina e Chirurgia, Università degli Studi di Milano-Bicocca, Monza, Italy; 3. NEUROMI, Università degli Studi di Milano-Bicocca, Monza, Italy; 4. Neuroimmunology Clinic, S. Gerardo Hospital, Monza, Italy

P10 Modulation of glutamate transport in platelets from multiple sclerosis patients

 $Zoia CP^{1}$, Frigo M², Bazzini C¹, Andreoni S¹, Fusco ML , Gironi M³, Ferrarese C^{1,2} and Cavaletti G^{1,2},

1. University of Milano-Bicocca, School of Medicine, Milan Center for Neuroscience; 2. Department of Neurology, San Gerardo Hospital; 3. CAM, Polidiagnostic Center; Monza, Italy



Faculty

Giampaolo Brichetto

National Coordinator Research in Rehabilitation at Italian MS Foundation.

Guido Cavaletti

Professor of Human Anatomy, Head, Experimental Neurology Unit and PhD program in Neuroscience at School of Medicine, University of Milano-Bicocca.

Giancarlo Comi

Professor of Neurology, Director of "Scuola di Specializzazione in Neurologia", Università Vita-Salute San Raffaele, Milan.

Tobias Derfuss

Professor of Neurology at Departments of Neurology and Biomedicine, University Hospital of Basel.

Eric J. Downer

Assistant Professor in Human Health and Disease and Director of BSc in Human Health and Disease programme, Trinity College Dublin.

Carlo Ferrarese

School of Medicine and Surgery and Scientific Director, Milan Center for Neuroscience University of Milano-Bicocca, Chief of Department of Neurology, San Gerardo Hospital, Monza

Maria Foti

Assistant Professor at University of Milano-Bicocca.

Robin J. Franklin

Director of the UK MS Society Cambridge Centre for Myelin Repair and Professor of Stem Cell Medicine at Clinical School, University of Cambridge.

Robert Fruscio

Associate Professor of Obstetrics and Gynecology at Department of Medicine and Surgery, University of Milano Bicocca.

Hanne Flinstad Harbo

Professor at Department of Neurology, Institute of Clinical Medicine, University of Oslo and Oslo University Hospital.

Kerstin Hellwig

Senior Consultant and MS Specialist at Department of Neurology, St. Josef Hospital/Ruhr University, Bochum.

Gianvito Martino

Director of Division of Neuroscience and Scientific Director at San Raffaele Scientific Institute and Professor of Experimental Biology, San Raffaele Vita-Salute University, Milan.

Paul M. Matthews

Edmond and Lily Safra Professor of Translational Neuroscience and Therapeutics and Head of the Division of Brain Sciences at Imperial College London.

Rosa Maria Moresco

Associate Professor at Department of Medicine and Surgery, University of Milano Bicocca, Milan. Head of preclinical PET Facility at San Raffaele Hospital, Milan

David Otaegui Bichot

Head of Multiple Sclerosis Group, Biodonostia Health Research Institute, Donostia - San Sebastián.

Jean-Philippe Ranjeva

Professor of Neuroscience, Aix-Marseille University.

Juha Rinne

Professor of Brain Neurotransmission, Turku PET Centre, University of Turku and Turku University Hospital.

Veerle Somers

Full Professor of Molecular Biology, Hasselt University.

Vice Dean of Transnationale Universiteit Limburg, School of Life Sciences.

Maria Trojano

Full Professor of Neurology at University of Bari. Head of the Department of Basic Medical Sciences, Neurosciences and Sense Organs and Director of Neurology and Neurophysiopathology Unit at Department of Neuroscience, University of Bari.



General info

Venue

Aula Magna, U6 Building - Università di Milano-Bicocca Piazza Ateneo Nuovo 1, Milan

During the Symposium, the Organizing Secretariat will be available according to the following timetable

Wednesday 13 September 2017 Thursday 14 September 2017 Friday 15 September 2017 13.30 am – 7.30 pm 8.30 am – 7.00 pm 8.30 am – 4.30 pm

During the Symposium only, you may contact the Organizing Secretariat at **+39 338 3387091**

Badge

Your personal ID badge will be ready for you at the Symposium Registration Desk.

For security reasons, delegates and exhibitors will be asked to wear their ID badges during the whole Symposium.

Registrations

REGISTRATION TYPE

Fee	After 16 July
Medical	€ 427,00
Other professions	€ 305,00
Junior Specialist (Under 35 years old)	€ 183,00
NeuroMI Members	Free Registration

All the fees are VAT included.

Registration fee includes: access to scientific sessions, Symposium kit, certificate of attendance.



General info

Language

The official language is English.

ECM for Italian participants only

Evento n. 1386 -197343

Il Simposio è stato accreditato nel Programma Nazionale ECM Agenas per **200 partecipanti**.

Sono stati assegnati: n. 10,5 crediti

Obiettivo formativo: applicazione nella pratica quotidiana dei principi e delle procedure dell'evidence based practice (EBM - EBN - EBP)

Professioni accreditate:

Medico Chirurgo:

Neurologia, Neurochirurgia, Neurofisiopatologia, Neuroradiologia, Medicina fisica e riabilitazione, Radiodiagnostica, Medicina Generale (Medici di famiglia), Ginecologia e Ostetricia.

I crediti verranno assegnati solo a chi avrà completato il 90% del percorso formativo, frequentando tutte le sessioni (firme entrata/ uscita) e restituendo il questionario di apprendimento compilato correttamente.

Gli attestati riportanti i crediti ECM saranno spediti dopo la verifica del completamento del percorso formativo via mail dal Provider.



General info

Social Events

Wednesday 13 September 2017

Welcome cocktail 8.00 pm

Thursday 14 September 2017

Coffee break	10.30 am - 11.00 am
Lunch	1.00 pm – 2.30 pm
Coffee break	4.00 pm – 4.30 pm

Friday 15 September 2017

Coffee break	10.45 am - 11.15 am
Lunch	1.10 pm – 2.00 pm

Certificate of attendance

Your certificate should be requested via email to **neuromi2017@theoffice.it** after the Symposium.

Liability & Insurance

The Organizing Secretariat and the Organizers accept no responsibility whatsoever for any injury or damage involving persons and property during the Symposium.

Poster Session

Posters can be put on Wednesday 13 September and must be removed at the end of the Symposium. Materials to hang posters will be available at the Secretariat desk.

Poster size: 70 cm (width) x 100 cm (height)-portrait orientation.



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More info, registrations and updated programme

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