

***Last name and name: Calabrese Massimiliano***

**Personal Information:**

E.mail : [calabresem@hotmail.it](mailto:calabresem@hotmail.it)

Date of Birth: December-13-1975

Place of Birth: Padova, Italy

Citizenship: italian

Languages: Italian, English

**Education and Professional Experience:**

***January 2008 to present:***

- Head of the Advanced Neuroimaging Lab, at the Multiple Sclerosis Center, Dept. of Neurosciences, University Hospital of Padova

***January 2006 to present:***

- Outpatient clinic of general neurology
- Outpatient clinic of Multiple Sclerosis and other inflammatory disease of CNS
- Consultant Neurologist at Euganea Medica

***July 2004 to July 2005***

- Research Fellow at the Neuroimmunology Branch of National Institute of Health in Bethesda, MD, (Chairman Henry McFarland and Roland Martin)

***December 2000 to December 2005:***

- Residency in Neurology with honours at Neurology Clinic, Dept. of Neurosciences, University of Padova
- Specialization thesis: "Regional cortical atrophy in Multiple Sclerosis: an MRI study"

***May 2000 to May 2001:***

- Attendance to the Neuroimmunology Lab at the department of Oncologic and Surgical Sciences (Chairman Prof. Chieco Bianchi and Giovanni Biasi)

***July 2000***

- Graduated in Medicine with honours at University of Padova

**Clinical activity, didactic and research**

**International Clinical Trials:**

Over the last ten years, Dr. Calabrese had played and plays a relevant role (coordinator, treating or examining neurologist) in more than 20 international Phase 2 and Phase 3 clinical trials.

### **Research Activities**

- Evaluation of **Cortical Grey Matter Pathology in Multiple Sclerosis by Nuclear Magnetic Resonance and post-processing image software**, with especial interest in:
  1. Prevalence, evolution and clinical correlation of Inflammatory Cortical lesions in MS
  2. Different patterns of regional cortical atrophy in the different forms of MS.
  3. Developing of new MRI sequences to better visualize cortical damage in MS.
- Clinical and Immunological metrics associated to development of Cortical Pathology
- Genetics: study of genes expression by microarrays in patients with high inflammatory cortical burden with the purpose to identify genetic markers of cortical pathology.
- Therapy: analysis of efficacy of disease modifying drugs on cortical pathology in Multiple Sclerosis

### **Prizes**

- First prize for best oral communication in the young session at 22<sup>nd</sup> Congress of the European Committee for Treatment and Research in Multiple Sclerosis September 27–30, 2006.
- First prize for best Poster presentation at 18<sup>o</sup> congress of SIN (Neurological Italian Society) in Florence, 13-17 October 2007.
- First prize for best Poster presentation at 20<sup>o</sup> congress of SIN (Neurological Italian Society) in Padova, 16-21 november 2009.

### **External Funding**

- Istituto Superiore di Sanità. Progetto 17 – Sclerosi Multipla: Biomarkers and Diagnosis – Unità Operativa 15.  
Euro 150.000
- Progetto Inter-area di Ateneo – 2009 - Università degli studi di Padova. Codice: CPDA099394/09, titolo: "Patologia corticale cerebrale e attivazione microgliale nella Sclerosi Multipla. Studio longitudinale in vivo di correlazione tra Diffusion Tensor Imaging Magnetic Resonance della corteccia e biomarkers liquorali di attivazione microgliale."  
Euro 100.000

### **Editorial Boards:**

- Associate Editor of BMC Neurology journal
- Associate Editor of Neurology Discover

### ***Ad hoc reviewer***

- New England Journal of Medicine
- Nature Neuroscience
- Lancet Neurology
- Brain
- Annals of Neurology
- Neurology
- Archives of Neurology
- JNNP
- Multiple Sclerosis Journal

### **List of five most important publications**

1. **Calabrese M**, Poretto V, Favaretto A, Alessio S, Bernardi V, Romualdi C, Rinaldi F, Perini P, Gallo P. Cortical lesion load associates with progression of disability in multiple sclerosis. *Brain*. 2012 Oct;135(Pt 10):2952-61. **IF 9.46**
2. **Calabrese M**, Oh MS, Favaretto A, Rinaldi F, Poretto V, Alessio S, Lee BC, Yu KH, Ma HI, Perini P, Gallo P. No MRI evidence of cortical lesions in neuromyelitis optica. *Neurology*. 2012 Oct 16;79(16):1671-6. **IF 8.31**
3. **Calabrese M**, Rinaldi F, Mattisi I, Bernardi V, Favaretto A, Perini P, Gallo P. [The predictive value of gray matter atrophy in clinically isolated syndromes](#). *Neurology*. 2011 Jul 19;77(3):257-63. **IF 8.31**
4. **Calabrese M**, Rocca MA, Atzori M, Mattisi I, Favaretto A, Perini P, Gallo P, Filippi M. A 3-year magnetic resonance imaging study of cortical lesions in relapse-onset multiple sclerosis. *Ann Neurol*. 2010 Mar;67(3):376-83. **IF 11.09**
5. **Calabrese M**, De Stefano N, Atzori M, Bernardi V, Mattisi I, Barachino L, Morra A, Rinaldi L, Romualdi C, Perini P, Battistin L, Gallo P. Cortical inflammatory lesions, as detected by Double Inversion Recovery MR imaging, can be detected early and are clinically relevant in Multiple Sclerosis. *Arch Neurol*. 2007 Oct;64(10):1416-22. **IF 7.58**

### **Publications in International Peer-Reviewed Journals**

**Total Impact Factor= 367.66**

Total IF (peer reviewed articles first/corresponding or last/corresponding author): **173,6**

**H Index = 21**

1. Geurts JJ, Calabrese M, Fisher E, Rudick RA. Measurement and clinical effect of grey matter pathology in multiple sclerosis. *Lancet Neurol*. 2012 Dec;11(12):1082-92.

2. Rinaldi F, Seppi D, Calabrese M, Perini P, Gallo P. Switching therapy from natalizumab to fingolimod in relapsing-remitting multiple sclerosis: clinical and magnetic resonance imaging findings. *Mult Scler*. 2012 Nov;18(11):1640-3.
3. Calabrese M, Favaretto A, Martini V, Gallo P. Grey matter lesions in MS: From histology to clinical implications. *Prion*. 2012 Oct 23;7.
4. Calabrese M, Favaretto A, Poretto V, Romualdi C, Rinaldi F, Mattisi I, Morra A, Perini P, Gallo P. Low degree of cortical pathology is associated with benign course of multiple sclerosis. *Mult Scler*. 2012 Oct 24.
5. Calabrese M, Poretto V, Favaretto A, Alessio S, Bernardi V, Romualdi C, Rinaldi F, Perini P, Gallo P. Cortical lesion load associates with progression of disability in multiple sclerosis. *Brain*. 2012 Oct;135(Pt 10):2952-61
6. Calabrese M, Seppi D, Cocco E, Poretto V, Rinaldi F, Perini P, Gallo P. Cortical Pathology in RRMS: Taking a Cue from Four Sisters. *Mult Scler Int*. 2012
7. Calabrese M, Oh MS, Favaretto A, Rinaldi F, Poretto V, Alessio S, Lee BC, Yu KH, Ma HI, Perini P, Gallo P. No MRI evidence of cortical lesions in neuromyelitis optica. *Neurology*. 2012 Oct 16;79(16):1671-6.
8. Rinaldi F, Calabrese M, Seppi D, Puthenparampil M, Perini P, Gallo P. Natalizumab strongly suppresses cortical pathology in relapsing-remitting multiple sclerosis. *Mult Scler*. 2012 May 8.
9. Calabrese M, Seppi D, Romualdi C, Rinaldi F, Alessio S, Perini P, Gallo P. Gray matter pathology in MS: a 3-year longitudinal study in a pediatric population. *AJNR Am J Neuroradiol*. 2012 Sep;33(8):1507-11. doi: 10.3174/ajnr.A3011.
10. Annovazzi P, Tomassini V, Bodini B, Boffa L, Calabrese M, Cocco E, Cordioli C, De Luca G, Frisullo G, Gallo A, Malucchi S, Paolicelli D, Pesci I, Radaelli M, Ragonese P, Roccatagliata L, Tortorella C, Vercellino M, Zipoli V, Gasperini C, Rodegher M, Solaro C. A cross-sectional, multicentre study of the therapeutic management of multiple sclerosis relapses in Italy. *Neurol Sci*. 2012 Mar 11.
11. Calabrese M, Rinaldi F, Seppi D, Favaretto A, Squarcina L, Mattisi I, Perini P, Bertoldo A, Gallo P. [Cortical Diffusion-Tensor Imaging Abnormalities in Multiple Sclerosis: A 3-year Longitudinal Study](#). *Radiology*. 2011 Oct 26.
12. Sormani MP, Calabrese M, Signori A, Giorgio A, Gallo P, De Stefano N. [Modeling the distribution of new MRI cortical lesions in multiple sclerosis longitudinal studies](#). *PLoS One*. 2011;6(10):e26712.
13. Calabrese M, Rinaldi F, Poretto V, Gallo P. [The puzzle of multiple sclerosis: gray matter finds its place](#). *Expert Rev Neurother*. 2011 Nov;11(11):1565-8.
14. [Calabrese M, Grossi P, Favaretto A, Romualdi C, Atzori M, Rinaldi F, Perini P, Saladini M, Gallo P. Cortical pathology in multiple sclerosis patients with epilepsy: a 3 year longitudinal study](#). *J Neurol Neurosurg Psychiatry*. 2011 Sep 2.

15. Calabrese M, Federle L, Bernardi V, Rinaldi F, Favaretto A, Varagnolo MC, Perini P, Plebani M, Gallo P. [The association of intrathecal immunoglobulin synthesis and cortical lesions predicts disease activity in clinically isolated syndrome and early relapsing-remitting multiple sclerosis.](#) Mult Scler. 2011 Aug 25.
16. Baracchini C, Perini P, Causin F, Calabrese M, Rinaldi F, Gallo P. [Progressive multiple sclerosis is not associated with chronic cerebrospinal venous insufficiency.](#) Neurology. 2011 Aug 30;77(9):844-50.
17. Calabrese M, Rinaldi F, Mattisi I, Bernardi V, Favaretto A, Perini P, Gallo P. [The predictive value of gray matter atrophy in clinically isolated syndromes.](#) Neurology. 2011 Jul 19;77(3):257-63.
18. Calabrese M, Rinaldi F, Grossi P, Gallo P. [Cortical pathology and cognitive impairment in multiple sclerosis.](#) Expert Rev Neurother. 2011 Mar;11(3):425-32. Review.
19. Baracchini C, Perini P, Calabrese M, Causin F, Rinaldi F, Gallo P. No evidence of chronic cerebrospinal venous insufficiency at multiple sclerosis onset. Ann Neurol. 2011 Jan;69(1):90-9.
20. Calabrese M, Bernardi V, Atzori M, Mattisi I, Favaretto A, Rinaldi F, Perini P, Gallo P. Effect of disease-modifying drugs on cortical lesions and atrophy in relapsing-remitting multiple sclerosis. Mult Scler. 2011 Jan 12.
21. Geurts JJ, Rosendaal SD, Calabrese M, Ciccarelli O, Agosta F, Chard DT, Gass A, Huerga E, Moraal B, Pareto D, Rocca MA, Wattjes MP, Yousry TA, Uitdehaag BM, Barkhof F; On behalf of the MAGNIMS Study Group. Consensus recommendations for MS cortical lesion scoring using double inversion recovery MRI. Neurology. 2011 Feb 1;76(5):418-424.
22. Filippi M, Rocca MA, Calabrese M, Sormani MP, Rinaldi F, Perini P, Comi G, Gallo P. Intracortical lesions: relevance for new MRI diagnostic criteria for multiple sclerosis. Neurology. 2010 Nov 30;75(22):1988-94.
23. Calabrese M, Battaglini M, Giorgio A, Atzori M, Bernardi V, Mattisi I, Gallo P, De Stefano N.I maging distribution and frequency of cortical lesions in patients with multiple sclerosis. Neurology. 2010 Oct 5;75(14):1234-40.
24. Calabrese M, Rinaldi F, Grossi P, Mattisi I, Bernardi V, Favaretto A, Perini P, Gallo P. Basal ganglia and frontal/parietal cortical atrophy is associated with fatigue in relapsing-remitting multiple sclerosis. Mult Scler. 2010 Oct;16(10):1220-8.
25. Rinaldi F, Calabrese M, Grossi P, Puthenparampil M, Perini P, Gallo P. Cortical lesions and cognitive impairment in multiple sclerosis. Neurol Sci. 2010 Jul 16.
26. Calabrese M, Filippi M, Gallo P Cortical lesions in multiple sclerosis. Nat Rev Neurol. 2010 Aug;6(8):438-44.

27. Rinaldi L, Rinaldi F, Perini P, Calabrese M, Seppi D, Grossi P, Mattisi I, Barzon L, Mengoli C, Sanzari M, Palú G, Gallo P. [No evidence of JC virus reactivation in natalizumab treated multiple sclerosis patients: an 18 month follow-up study.](#) *J Neurol Neurosurg Psychiatry*. 2010 Jun 14.
28. Rinaldi F, Calabrese M, Seppi D, Puthenparampil M, Perini P, Gallo P. Natalizumab prevents the accumulation of cortical lesions in relapsing remitting multiple sclerosis: a preliminary report. *Neurol Sci*. 2010 Jun 10.
29. De Stefano N, Giorgio A, Battaglini M, Rovaris M, Sormani MP, Barkhof F, Korteweg T, Enzinger C, Fazekas F, Calabrese M, Dinacci D, Tedeschi G, Gass A, Montalban X, Rovira A, Thompson A, Comi G, Miller DH, Filippi M. Assessing brain atrophy rates in a large population of untreated multiple sclerosis subtypes. *Neurology*. 2010 Jun 8;74(23):1868-76.
30. Calabrese M, Rocca MA, Atzori M, Mattisi I, Favaretto A, Perini P, Gallo P, Filippi M. A 3-year magnetic resonance imaging study of cortical lesions in relapse-onset multiple sclerosis. *Ann Neurol*. 2010 Mar;67(3):376-83.
31. Massimiliano Calabrese, Francesca Rinaldi, Irene Mattisi, Paola Grossi, Alice Favaretto, Matteo Atzori, Valentina Bernardi, Luigi Barachino, Chiara Romualdi, Luciano Rinaldi, Paola Perini, and Paolo Gallo. Widespread Cortical Thinning Characterizes MS Patients with Mild Cognitive Impairment. *Neurology*. 2010 Jan 26;74(4):321-8
32. Calabrese M, Mattisi I, Favaretto A, Rinaldi F, Atzori M, Bernardi V, Barachino L, Romualdi C, Rinaldi L, Perini P, Gallo P. Magnetic Resonance Evidence of Cerebellar Cortical Pathology in Multiple Sclerosis. *J Neurol Neurosurg Psychiatry*. 2009 Dec 3.
33. Rinaldi L, Perini P, Calabrese M, Gallo P. Cyclophosphamide as second-line therapy in multiple sclerosis: benefits and risks. *Neurol Sci*. 2009 Oct;30 Suppl 2:S171-3.
34. Rinaldi F, Perini P, Calabrese M, Rinaldi L, Gallo P. Severe relapses after the first infusion of natalizumab in active relapsing-remitting multiple sclerosis. *Mult Scler*. 2009 Nov;15(11):1359-62. Epub 2009 Oct 7.
35. Calabrese M, Agosta F, Rinaldi F, Mattisi I, Grossi P, Favaretto A, Atzori M, Bernardi V, Barachino L, Rinaldi L, Perini P, Gallo P, Filippi M. Cortical lesions and atrophy associated with cognitive impairment in relapsing-remitting multiple sclerosis. *Arch Neurol*. 2009 Sep;66(9):1144-50.
36. Calabrese M, Gallo P. Magnetic resonance evidence of cortical onset of multiple sclerosis. *Mult Scler*. 2009 Aug;15(8):933-41.
37. Rovaris M, Barkhof F, Calabrese M, De Stefano N, Fazekas F, Miller DH, Montalban X, Polman C, Rocca MA, Thompson AJ, Yousry TA, Filippi M. MRI features of benign multiple sclerosis: toward a new definition of this disease phenotype. *Neurology*. 2009 May 12;72(19):1693-701. Review.

38. Calabrese M, Rocca M, Atzori M, Mattisi I, Bernardi V, Favaretto A, Barachino L, Romualdi C, Rinaldi L, Perini P, Gallo P, Filippi M. Cortical lesions in primary progressive multiple sclerosis: a two-year longitudinal MR study. *Neurology*, Apr 14;72(15):1330-6.
39. Pierno AC, Turella L, Grossi P, Tubaldi F, Calabrese M, Perini P, Barachino L, Morra A, Gallo P, Castiello U. Investigation of the neural correlates underlying action observation in multiple sclerosis patients. *Exp Neurol*. 2009 Mar 10.
40. Calabrese M, Filippi M, Rovaris M, Mattisi I, Bernardi V, Atzori M, Favaretto A, Barachino L, Rinaldi L, Romualdi C, Perini P, Gallo P. Morphology and evolution of cortical lesions in multiple sclerosis. A longitudinal MRI study. *Neuroimage*. 2008 Oct 1;42(4):1324-8
41. Calabrese M, Filippi M, Rovaris M, Bernardi V, Atzori M, Mattisi I, Favaretto A, Barachino L, Rinaldi L, Romualdi C, Perini P, Gallo P. Evidence of cortical sparing in Benign MS: a longitudinal MRI study. *Mult Scler*. 2009 Jan;15(1):36-41.
42. Filippi M, Calabrese M, Gallo P. Response letter regarding the article "Evidence for relative cortical sparing in benign multiple sclerosis: a longitudinal magnetic resonance imaging study," by Calabrese, et al. *Mult Scler*. 2008 Dec 17
43. Atzori M, Battistella P, Perini P, Calabrese M, Fontanin M, Laverda A, Suppiej A, Drigo P, Grossi P, Rinaldi L, Gallo P. Clinical and diagnostic aspects of multiple sclerosis and acute monophasic encephalomyelitis in pediatric patients: a single centre prospective study. *Mult Scler*. 2008 Nov 5.
44. Perini P, Calabrese M, Rinaldi L, Gallo P. Cyclophosphamide-based combination therapies for autoimmunity. *Neurol Sci*. 2008 Sep;29 Suppl 2:S233-4. Review
45. Calabrese M, De Stefano N, Atzori M, Bernardi V, Mattisi I, Barachino L, Rinaldi L, Morra A, McAuliffe MM, Perini P, Battistin L, Gallo P. Extensive cortical inflammation is associated with epilepsy in multiple sclerosis. *J Neurol*. 2008 Apr;255(4):581-6.
46. Calabrese M, De Stefano N, Atzori M, Bernardi V, Mattisi I, Barachino L, Morra A, Rinaldi L, Romualdi C, Perini P, Battistin L, Gallo P. Cortical inflammatory lesions, as detected by Double Inversion Recovery MR imaging, can be detected early and are clinically relevant in Multiple Sclerosis. *Arch Neurol*. 2007 Oct;64(10):1416-22.
47. Perini P, Calabrese M, Rinaldi L, Gallo P. The safety profile of cyclophosphamide in multiple sclerosis therapy. *Expert Opin Drug Saf*. 2007 Mar;6(2):183-90. Review
48. Calabrese M, Atzori M, Bernardi V, Morra A, Romualdi C, Rinaldi L, McAuliffe MJ, Barachino L, Perini P, Fischl B, Battistin L, Gallo P. Cortical atrophy is relevant in multiple sclerosis at clinical onset. *J Neurol*. 2007 Mar 14.
49. Bagnato F, Butman JA, Gupta S, Calabrese M, Pezawas L, Ohayon JM, Tovar-Moll F, Riva M, Cao MM, Talagala SL, McFarland HF. In vivo detection of cortical plaques by MR imaging in patients with multiple sclerosis. *AJNR Am J Neuroradiol*. 2006 Nov-Dec;27(10):2161-7.

50. Rinaldi L, Gallo P, Calabrese M, Ranzato F, Luise D, Colavito D, Motta M, Guglielmo A, Del Giudice E, Romualdi C, Ragazzi E, D'Arrigo A, Dalle Carbonare M, Leontino B, Leon A. Longitudinal analysis of immune cell phenotypes in early stage multiple sclerosis: distinctive patterns characterize MRI-active patients. *Brain*. 2006 Aug;129(Pt 8):1993-2007.
51. Perini P, Calabrese M, Tiberio M, Ranzato F, Battistin L, Gallo P. Mitoxantrone versus cyclophosphamide in secondary-progressive multiple sclerosis: a comparative study. *J Neurol*. 2006 Aug;253(8):1034-40.
52. Perini P, Ranzato F, Calabrese M, Battistin L, Gallo P. Intrathecal IgM production at clinical onset correlates with a more severe disease course in Multiple Sclerosis. *J Neurol Neurosurg Psychiatry*. 2006 Mar 30;
53. Laroni A, Calabrese M, Perini P, Albergoni MP, Ranzato F, Tiberio M, Battistin L, Gallo P. Multiple sclerosis and autoimmune diseases Epidemiology and HLA-DR association in North-east Italy. *J Neurol*. 2006 Mar 6;
54. Perini P, Calabrese M, Biasi G, Gallo P. The clinical impact of interferon beta antibodies in relapsing-remitting MS. *J Neurol*. 2004 Mar;251(3):305-9.
55. Ranzato F, Perini P, Tzintzeva E, Tiberio M, Calabrese M, Ermani M, Davettag F, De Zanche L, Garbin E, Verdelli F, Villacara A, Volpe G, Moretto G, Gallo P. Increasing frequency of multiple sclerosis in Padova, Italy: a 30 year epidemiological survey. *Mult Scler*. 2003 Aug;9(4):387-92.
56. Perini P, Calabrese M, Ranzato F, Tiberio M, Gallo P. Cerebrospinal fluid examination in the differential diagnosis of inflammatory myelopathies. *Neurol Sci*. 2001 Nov;22 Suppl 2:S65-8. Review.

### **Publications in Scientific Books**

1. The Gray Matter Pathology in Multiple Sclerosis". Calabrese M; Gallo P, Edizioni Publishock 2010);
2. Trattato di Neurologia : 2010 - Malattie Infiammatorie del Sistema Nervoso Centrale. In: Angelini C, Battistin L. Neurologia Clinica.