

ROBERTA MAGLIOZZI CV

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Education and qualifications

- September 1993 - July 1999 University “La Sapienza” – Rome, Italy
Laurea degree (Undergraduate Honours Degree), with specialisation in Cell Biology and Neuroscience.
- September 2006- July 2011: PhD-Imperial College London – London, UK
PhD fellowship in Cellular and Molecular Neuroscience.

Grants

- March 2012-February 2014: grant from the Italian Multiple Sclerosis Foundation, FISM 2011/R/23 (63.000,0 Euro): “A combined neuropathological and molecular study addressing the link between meningeal inflammation and cortical brain damage in multiple sclerosis”.
- November 2012-February 2016: grant from the Italian Ministry of Health, Young Investigators 2010 GR-2010-2313255 (297.000,0 Euro): “Integration of advanced molecular analyses and magnetic resonance imaging for the identification of biomarkers of disease progression in multiple sclerosis”.
- March 2017- : 3 years grant from the Italian Multiple Sclerosis Foundation, FISM 2016/R/23 (80.000,0 Euro): “Structural and inflammatory components of cortical pathology in multiple sclerosis”.

Awards

- IV “Marco Vergelli” award from AINI (Italian Association of Neuroimmunology), Taormina - Italy, 22-25/10/03.
- Best poster presentation at the “Young Scientist Day” of the Imperial College of London, London-UK, 17-05-06
- Best poster presentation at the “Young Scientist Day” of the Imperial College of London, London-UK, 28-06-08

Research Activity

- September 1999– March 2004:

Training Fellowship of F.I.S.M. (Italian Foundation of Multiple Sclerosis) - Laboratory of Organ and System Pathophysiology - Istituto Superiore di Sanità - Rome, Italy:
“Study of the recruitment and maturation mechanisms of B lymphocytes in the C.N.S. of E.A.E. affected mice”

- April 2004 – August 2006:

Research Fellowship of Italian Foundation of Multiple Sclerosis (FISM) - Dept. of Cell Biology and Neurosciences of the Istituto Superiore di Sanità (Rome-Italy) and Dept. of Cellular and Molecular Neuroscience of Imperial College London. Research field: “Pathogenic relevance of intrameningeal B-cell follicles in MS patients”.

- September 2006- September 2009:

Full-time PhD fellowship- Dept. of Cellular and Molecular Neuroscience of Imperial College (London-UK): “Molecular mechanisms of cortical pathology in secondary progressive multiple sclerosis”.

-October 2010 - February 2016:

Research Scientist in the Unit of ‘Inflammatory and Demyelinating Diseases of the Nervous System’, Dept. Cell Biology and Neuroscience, Istituto Superiore di Sanità, Rome.

-March 2016- November 2017:

Research Fellowship in the Dept. of Neurosciences of the University of Verona.

-November 2017– October 2022:

Research Associate (Tenure track) in the Dept. of Neurosciences of the University of Verona.

Biographical sketch:

My main research interest is to better understand the immunopathological mechanisms involved in multiple sclerosis and in particular in cortical grey matter pathology. I have paid particular attention to the inflammatory response and the role of lymphoid-like structures in the meningeal compartment of post-mortem MS tissues and in the intrathecal inflammation generated in the cerebrospinal fluid analysis of MS patients. This with the main aim to identify possible neuroimmunological mechanisms involved in multiple sclerosis and potential new biomarkers of the different disease phenotypes and of MS progression.

Peer Reviewed Publications (28):

Citations: 2693 total citations by 1695 documents

h-index: 20

1. Magliozzi R, Howell OW, Nicholas R, Cruciani C, Castellaro M, Romualdi C, Rossi S, Pitteri M, Benedetti MD, Gajofatto A, Pizzini FB, Montemezzi S, Rasia S, Capra R, Bertoldo A, Facchiano F, Monaco S, Reynolds R, Calabrese M. Inflammatory intrathecal profiles and cortical damage in multiple sclerosis. *Ann Neurol*. 2018 Mar 8. doi: 10.1002/ana.25197. [Epub ahead of print] PubMed PMID: 29518260.

2. Pitteri M, Magliozzi R, Bajrami A, Camera V, Calabrese M. Potential neuroprotective effect of Fingolimod in multiple sclerosis and its association with clinical variables. *Expert Opin Pharmacother*. 2018 Mar;19(4):387-395. doi: 10.1080/14656566.2018.1434143. Epub 2018 Feb 3. PubMed PMID: 29397790.
3. Calabrese M, Pitteri M, Farina G, Bajrami A, Castellaro M, Magliozzi R, Monaco S. Dimethyl fumarate: a possible exit strategy from natalizumab treatment in patients with multiple sclerosis at risk for severe adverse events. *J Neurol Neurosurg Psychiatry*. 2017 Aug 26.
4. Cencioni MT, Magliozzi R, Nicholas R, Ali R, Malik O, Reynolds R, Borsellino G, Battistini L, Muraro P. Programmed death 1 is highly expressed on CD8+CD57+ T cells in patients with stable multiple sclerosis and inhibits their cytotoxic response to EBV. *Immunology*. 2017 Aug 2.
5. Castellaro M, Magliozzi R, Palombit A, Pitteri M, Silvestri E, Camera V, Montemezzi S, Pizzini FF, Bertoldo A, Reynolds R, Monaco S and Calabrese M. Heterogeneity of Cortical Lesion Susceptibility Mapping in Multiple Sclerosis. Accepted by *American Journal of Neuroradiology*. [Epub ahead of print]
6. Farina G, Magliozzi R, Pitteri M, Reynolds R, Rossi S, Gajofatto A, Benedetti MD, Facchiano F, Monaco S, Calabrese M. Increased cortical lesion load and intrathecal inflammation is associated with oligoclonal bands in multiple sclerosis patients: a combined CSF and MRI study. *J Neuroinflammation*. 2017 Feb 21;14(1):40. doi: 10.1186/s12974-017-0812-y. PubMed PMID: 28222766;
7. Pitteri M, Romualdi C, Magliozzi R, Monaco S, Calabrese M. Cognitive impairment predicts disability progression and cortical thinning in MS: An 8-year study. *Mult Scler*. 2016 Aug 15.
8. Calabrese M, Castellaro M, Bertoldo A, De Luca A, Pizzini FB, Ricciardi GK, Pitteri M, Zimatore S, Magliozzi R, Benedetti MD, Manganotti P, Montemezzi S, Reynolds R, Gajofatto A, Monaco S. Epilepsy in multiple sclerosis: The role of temporal lobe damage. *Mult Scler*. 2016 Jun 3. pii: 1352458516651502. [Epub ahead of print] PubMed PMID: 27260699.
9. Calabrese M, Reynolds R, Magliozzi R, Castellaro M, Morra A, Scalfari A, Farina G, Romualdi C, Gajofatto A, Pitteri M, Benedetti MD, Monaco S. Regional Distribution and Evolution of Gray Matter Damage in Different Populations of Multiple Sclerosis Patients. *PLoS One*. 2015 Aug 12;10(8):e0135428. PubMed PMID: 26267665
10. Nicholas R, Magliozzi R, Campbell G, Mahad D, Reynolds R. Temporal lobe cortical pathology and inhibitory GABA interneuron cell loss are associated with seizures in multiple sclerosis. *Mult Scler*. 2016 Jan;22(1):25-35. PubMed PMID: 25921040.
11. Macrì S, Ceci C, Onori MP, Invernizzi RW, Bartolini E, Altabella L, Canese R, Imperi M, Orefici G, Creti R, Margarit I, Magliozzi R, Laviola G. Mice repeatedly exposed to Group A β -Haemolytic Streptococcus show perseverative behaviors, impaired sensorimotor gating, and immune activation in rostral diencephalon. *Sci Rep*. 2015 Aug 25;5:13257. PubMed PMID: 26304458

12. Calabrese M, Magliozzi R, Ciccarelli O, Geurts JJ, Reynolds R, Martin R. Exploring the origins of grey matter damage in multiple sclerosis. *Nat Rev Neurosci*. 2015 Mar;16(3):147-58. doi: 10.1038/nrn3900. Review. PubMed PMID: 25697158.
13. Durrenberger PF, Fernando FS, Magliozzi R, Kashefi SN, Bonnert TP, Ferrer I, Seilhean D, Nait-Oumesmar B, Schmitt A, Gebicke-Haerter PJ, Falkai P, Grünblatt E, Palkovits M, Parchi P, Capellari S, Arzberger T, Kretzschmar H, Roncaroli F, Dexter DT, Reynolds R. Selection of novel reference genes for use in the human central nervous system: a BrainNet Europe Study. *Acta Neuropathol*. 2012 Dec;124(6):893-903. PubMed PMID: 22864814.
14. Gardner C, Magliozzi R, Durrenberger PF, Howell OW, Rundle J, Reynolds R. Cortical grey matter demyelination can be induced by elevated pro-inflammatory cytokines in the subarachnoid space of MOG-immunized rats. *Brain*. 2013 Dec;136(Pt12):3596-608. PubMed PMID: 24176976.
15. Magliozzi R, Serafini B, Rosicarelli B, Chiappetta G, Veroni C, Reynolds R, Aloisi F. B-cell enrichment and Epstein-Barr virus infection in inflammatory cortical lesions in secondary progressive multiple sclerosis. *J Neuropathol Exp Neurol*. 2013 Jan;72(1):29-41. PubMed PMID: 23242282.
16. Choi SR, Howell OW, Carassiti D, Magliozzi R, Gveric D, Muraro PA, Nicholas R, Roncaroli F, Reynolds R. Meningeal inflammation plays a role in the pathology of primary progressive multiple sclerosis. *Brain*. 2012 Oct;135(Pt 10):2925-37. PubMed PMID: 22907116.
17. Brambilla R, Ashbaugh JJ, Magliozzi R, Dellarole A, Karmally S, Szymkowski DE, Bethea JR. Inhibition of soluble tumour necrosis factor is therapeutic in experimental autoimmune encephalomyelitis and promotes axon preservation and remyelination. *Brain*. 2011 Sep;134(Pt 9):2736-54. PubMed PMID: PMC3170538.
18. Howell OW, Reeves CA, Nicholas R, Carassiti D, Radotra B, Gentleman SM, Serafini B, Aloisi F, Roncaroli F, Magliozzi R, Reynolds R. Meningeal inflammation is widespread and linked to cortical pathology in multiple sclerosis. *Brain*. 2011 Sep;134(Pt 9):2755-71. PubMed PMID: 21840891.
19. Magliozzi R, Howell OW, Reeves C, Roncaroli F, Nicholas R, Serafini B, Aloisi F, Reynolds R. A Gradient of neuronal loss and meningeal inflammation in multiple sclerosis. *Ann Neurol*. 2010 Oct;68(4):477-93. PubMed PMID: 20976767.
20. Aloisi F, Serafini B, Magliozzi R, Howell OW, Reynolds R. Detection of Epstein-Barr virus and B-cell follicles in the multiple sclerosis brain: what you find depends on how and where you look. *Brain*. 2010 Dec;133(Pt 12):e157. PubMed PMID: 20739348.
21. Serafini B, Severa M, Columba-Cabezas S, Rosicarelli B, Veroni C, Chiappetta G, Magliozzi R, Reynolds R, Coccia EM, Aloisi F. Epstein-Barr virus latent infection and BAFF expression in B cells in the multiple sclerosis brain: implications for viral persistence and intrathecal B-cell activation. *J Neuropathol Exp Neurol*. 2010 Jul;69(7):677-93. PubMed PMID: 20535037.

22. Amadio S, Montilli C, Magliozzi R, Bernardi G, Reynolds R, Volonté C. P2Y12 receptor protein in cortical gray matter lesions in multiple sclerosis. *Cereb Cortex*. 2010 Jun;20(6):1263-73. PubMed PMID: 19783848.
23. Serafini B, Magliozzi R, Rosicarelli B, Reynolds R, Zheng TS, Aloisi F. Expression of TWEAK and its receptor Fn14 in the multiple sclerosis brain: implications for inflammatory tissue injury. *J Neuropathol Exp Neurol*. 2008 Dec;67(12):1137-48. PubMed PMID: 19018248.
24. Aloisi F, Columba-Cabezas S, Franciotta D, Rosicarelli B, Magliozzi R, Reynolds R, Ambrosini E, Coccia E, Salvetti M, Serafini B. Lymphoid chemokines in chronic neuroinflammation. *J Neuroimmunol*. 2008 Jul 31;198(1-2):106-12. PubMed PMID: 18539341.
25. Serafini B, Rosicarelli B, Franciotta D, Magliozzi R, Reynolds R, Cinque P, Andreoni L, Trivedi P, Salvetti M, Faggioni A, Aloisi F. Dysregulated Epstein-Barr virus infection in the multiple sclerosis brain. *J Exp Med*. 2007 Nov 26;204(12):2899-912. PubMed Central PMCID: PMC2118531.
26. Magliozzi R, Howell O, Vora A, Serafini B, Nicholas R, Puopolo M, Reynolds R, Aloisi F. Meningeal B-cell follicles in secondary progressive multiple sclerosis associate with early onset of disease and severe cortical pathology. *Brain*. 2007 Apr;130(Pt 4):1089-104. PubMed PMID: 17438020.
27. Columba-Cabezas S, Griguoli M, Rosicarelli B, Magliozzi R, Ria F, Serafini B, Aloisi F. Suppression of established experimental autoimmune encephalomyelitis and formation of meningeal lymphoid follicles by lymphotoxin beta receptor-Ig fusion protein. *J Neuroimmunol*. 2006 Oct;179(1-2):76-86. PubMed PMID: 16870269.
28. Serafini B, Rosicarelli B, Magliozzi R, Stigliano E, Capello E, Mancardi GL, Aloisi F. Dendritic cells in multiple sclerosis lesions: maturation stage, myelin uptake, and interaction with proliferating T cells. *J Neuropathol Exp Neurol*. 2006 Feb;65(2):124-41. PubMed PMID: 16462204.
29. Serafini B, Rosicarelli B, Magliozzi R, Stigliano E, Aloisi F. Detection of ectopic B-cell follicles with germinal centers in the meninges of patients with secondary progressive multiple sclerosis. *Brain Pathol*. 2004 Apr;14(2):164-74. PubMed PMID: 15193029.
30. Magliozzi R, Columba-Cabezas S, Serafini B, Aloisi F. Intracerebral expression of CXCL13 and BAFF is accompanied by formation of lymphoid follicle-like structures in the meninges of mice with relapsing experimental autoimmune encephalomyelitis. *J Neuroimmunol*. 2004 Mar;148(1-2):11-23. PubMed PMID: 14975582.
31. Magliozzi R, Nardacci R, Scarsella G, Di Carlo V, Stefanini S. Effects of the plasticiser DEHP on lung of newborn rats: catalase immunocytochemistry and morphometric analysis. *Histochem Cell Biol*. 2003 Jul;120(1):41-9. PubMed PMID: 12802597.
32. Aloisi F, Ambrosini E, Columba-Cabezas S, Magliozzi R, Serafini B. Intracerebral regulation of immune responses. *Ann Med*. 2001 Nov;33(8):510-5. Review. PubMed PMID: 11730157.

Courses

- October 1999: "Internet and the Microscopical Images", SIME (Italian Society of Electronic Microscopy), Modena-Italy, 7-10/10/99.
- September 2000: "Connective tissue", organised by SIME, Modena-Italy, 11-13/09/00.
- October 2000: "Microscopy techniques in the study of cells in culture", Rome-Italy, 23-27/10/00.
- March 2001: "Analysis precision", Rome-Italy, 28/03/01.
- May 2001: "Glial cells from CNS of rodents", Roma-Italy, 7-10/05/01.
- September 2007: "European Society of Neuroimmunology (ESNI)" course, Oxford-UK.
- June 2009: workshop: "Clinical trial authorisations and MHRA inspections", London-UK.
- October 2010: "European Society of Neuroimmunology (ESNI)" course, Sitges-SP.
- July 2013: "British Neuropathology Society summer school: recent advances in neuropathology and applied neurobiology", Cirencester (UK).

Technical Knowledge

- Experimental animal manipulation;
- Preparation of murine models of multiple sclerosis: experimental autoimmune encephalomyelitis (EAE);
- Perfusion of EAE affected mice and organ dissection;
- Dissection and preservation of fresh human brain tissue;
- Use of cryostat and paraffin microtome;
- Immunohistochemical and immunofluorescence techniques;
- Lasercapture microdissection from human brain sections and further molecular biology analysis;
- In situ hybridization;
- Confocal microscopy, image computer acquisition and morphometric analysis;
- RNA/DNA/protein extraction from human brain tissues;
- Molecular biology techniques: real-time RT-PCR, Microarray gene array (Illumina platform), Nanodrop, Agilent Bioanalyser;
- Processing and analysis of microarray datagene expression profiling;
- Proteomic analysis of cerebrospinal fluid by Western Blot, ELISA, Dot Blot, Bio-Plex System.

Additional Skills

Languages: Italian Mother Tongue

Good Knowledge of the English Language, both written and spoken.

IT: Good use of Windows (Word, Excel, Photoshop, Internet Explorer, GraphPad PRISM), gene analysis software (Studio-Pathway, Rosetta-Resolver, Ingenuity Pathway) and image analysis systems (Vidas , Image ProPlus, ZEISS KS300).

**Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae
in base all'art. 13 del D. Lgs. 196/2003**

Verona, 17-1-2017