

PERSONAL INFORMATION

Rosella Mechelli

Università Telematica San Raffaele and IRCCS San Raffaele Roma

Via di Val Cannuta, 247, 00166-Rome-Italy

+39 0652252257

 rosella.mechelli@uniroma5.it

 <https://www.uniroma5.it/docenti/149/rosella-mechelli>

Sex Female | Date of birth 25/06/1971 | Nationality Italian

WORK EXPERIENCE

From September 2018

Research assistant – RTD type A-MED/04

Università Telematica San Raffaele, Rome

Via di Val Cannuta 247, 00166 Rome (Italy)

RESEARCH: Neuroimmunology applied to neurodegenerative disease such as multiple sclerosis. Use of both traditional and emerging techniques (including digital PCR, omics methodologies and bioinformatics analyses) to study the interaction between genetic and environmental factors in complex diseases.

TEACHING: professor in the course "Pharmacology, pathology and regulatory sciences" for the MSc in Science of Human Nutrition

INSTITUTIONAL ROLE: Member of the commission evaluating the admission to the MSc in Science of Human Nutrition.

2017-2018

Adjunct Professor–MED/04

Università Telematica San Raffaele, Rome

Via di Val Cannuta 247, 00166 Rome (Italy)

2010-2016

Post-doc Research fellow

Department of Neuroscience, Mental Health and Sensory Organs, Faculty of Medicine and Psychology, Sapienza University of Rome, S. Andrea Hospital, Rome (Italy)

Via di Grottarossa, 1035, 00189 Rome (Italy)

2005-2009

Post-doc Research fellow

Department of Neurology - Sapienza University of Rome, Rome (Italy)

Viale dell'Università, 30, 00185 Rome (Italy)

2004

Post-doc Research fellow

Department of Genetic and Molecular Biology-Charles Darwin, Sapienza University of Rome, Rome (Italy) P.le Aldo Moro, 5, 00185 Rome (Italy)

EDUCATION AND TRAINING

2007

Post-graduated Master degree in Methodologies for the research and development of new therapies

Sapienza University of Rome, Rome (Italy)

Pathology, immunology, neurology, regulatory sciences.

2004

PhD in Genetic and Molecular Biology

Sapienza University of Rome, Rome (Italy)

Genetic, Molecular and cellular biology, Structural biology, Microscopy (Atomic Force Microscopy), Statistic.

2000

Degree in Biological Sciences

Sapienza University of Rome, Rome (Italy)

Cellular biology, Genetic, Molecular biology, Chemistry, Mathematics, Physics.

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

English (intermediate reading, writing and speaking)
French (advanced reading and speaking, Intermediate writing)

Job-related skills

Ad hoc referee for international peer-reviewed journals (Journal of Clinical Immunology, Pharmacogenomics, Plos One, BMC Genomics, Future Virology, Viral Immunology, Multiple Sclerosis Journal, Frontiers in Immunology) and evaluator of grant applications for ARSEP Foundation, UK-MS Society, MS Research Australia, Italian Multiple Sclerosis Foundation (FISM) and Medical Research Council (MRC-UK).

Technology Transfer skills

Co-author of the Italian and European Patent: IT1417523 (18.08.2015); EP2981625 (06.06.2019)
EPSTEIN BARR VIRUS GENOTYPIC VARIANTS AND USES THEREOF AS RISK PREDICTORS, BIOMARKERS AND THERAPEUTIC TARGETS OF MULTIPLE SCLEROSIS

Higher Education & Training skills

2015-2016: Member of the Scientific and Educational Board, Master in Methodologies for Therapeutic Development in Neurology, Sapienza University of Rome (Rome, Italy)

ADDITIONAL INFORMATION

Projects

Principal investigator of the following projects:
- 2014 Italian Multiple Sclerosis Foundation (FISM- grant number 2014/R/12) "A "candidate interactome" approach in multiple sclerosis: from gene-environment interplay to therapeutic target hunting"
-2017 FISM (multicentre study, grant number 2017/R/18) "Epstein-Barr virus genotypes in multiple sclerosis and their functional relevance in the disease etiology"
-2019 National Multiple Sclerosis Society (NMSS-USA) "EBV genotyping in MS"

From 2005 until now Investigator in more than 20 projects funded by National and international research programs: FISM, Italian Ministry of health (Ricerca Finalizzata), Italian Ministry of Science (PRIN), Association pour la recherche sur la sclérose en plaque (ARSEP-FR).

Scientific Societies membership and awards

2006-present, Member of Italian Association of Neuroimmunology (AINI)
2016: Winner of the first AINI Award given to a society member for his work and commitment in the neuroimmunology field
2019: EBV genotyping in MS, National Multiple Sclerosis Society (NMSS)

Publication Track record

Author of 47 publications, **h-index= 19 (Scopus)**

Publications

- 1: Bellucci G, Rinaldi V, Buscarinu MC, Reniè R, Bigi R, Pellicciari G, Morena E, Romano C, Marrone A, **Mechelli R**, Salvetti M, Ristori G. Multiple Sclerosis and SARS-CoV-2: Has the Interplay Started? Front Immunol. 2021;12:755333.
- 2: Buscarinu MC, Gargano F, Lionetto L, Capi M, Morena E, Fornasiero A, Reniè R, Landi AC, Pellicciari G, Romano C, **Mechelli R**, Romano S, Borsellino G, Battistini L, Simmaco M, Fagnani C, Salvetti M, Ristori G. Intestinal Permeability and Circulating CD161+CCR6+CD8+T Cells in Patients With Relapsing- Remitting Multiple Sclerosis Treated With Dimethylfumarate. Front Neurol. 2021;12:683398.
- 3: **Mechelli R**, Romano S, Romano C, Morena E, Buscarinu MC, Bigi R, Bellucci G, Reniè R, Pellicciari G, Salvetti M, Ristori G. MAIT Cells and Microbiota in Multiple Sclerosis and Other Autoimmune Diseases. Microorganisms. 2021;9(6):1132.
- 4: Ferraldeschi M, Romano S, Giglio S, Romano C, Morena E, **Mechelli R**, Annibali V, Ubaldi M, Buscarinu MC, Umeton R, Sani G, Vecchione A, Salvetti M, Ristori G. Circulating hsa-miR-323b-3p in Huntington's Disease: A Pilot Study. Front Neurol. 2021;12:657973.
- 5: Angeloni B, Bigi R, Bellucci G, **Mechelli R**, Ballerini C, Romano C, Morena E, Pellicciari G, Reniè R, Rinaldi V, Buscarinu MC, Romano S, Ristori G, Salvetti M. A Case of Double Standard: Sex Differences in Multiple Sclerosis Risk Factors. Int J Mol Sci. 2021 Apr 2;22(7):3696.
- 6: Bellucci G, Ballerini C, **Mechelli R**, Bigi R, Rinaldi V, Reniè R, Buscarinu MC, Baranzini SE, Madireddy L, Matarese G, Salvetti M, Ristori G. SARS-CoV-2 meta-interactome suggests disease-specific, autoimmune pathophysiology and therapeutic targets. F1000Res. 2020;9:992.
- 7: **Mechelli R**, Umeton R, Manfrè G, Romano S, Buscarinu MC, Rinaldi V, Bellucci G, Bigi R, Ferraldeschi M, Salvetti M, Ristori G. Reworking GWAS Data to Understand the Role of Nongenetic Factors in MS Etiopathogenesis. Genes (Basel). 2020;11(1):97.
- 8: Buscarinu MC, Fornasiero A, Romano S, Ferraldeschi M, **Mechelli R**, Reniè R, Morena E, Romano C, Pellicciari G, Landi AC, Salvetti M, Ristori G. The Contribution of Gut Barrier Changes to Multiple Sclerosis Pathophysiology. Front Immunol. 2019;10:1916.
- 9: Romano S, Ferraldeschi M, Bagnato F, **Mechelli R**, Morena E, Caldano M, Buscarinu MC, Fornasiero A, Frontoni M, Nociti V, Mirabella M, Mayer F, Bertolotto A, Pozzilli C, Vanacore N, Salvetti M, Ristori G. Drug Holiday of Interferon Beta 1b in Multiple Sclerosis: A Pilot, Randomized, Single Blind Study of Non-inferiority. Front Neurol. 2019 Jul 16;10:695.
- 10: Severa M, Rizzo F, Srinivasan S, Di Dario M, Giacomini E, Buscarinu MC, Cruciani M, Etna MP, Sandini S, **Mechelli R**, Farina A, Trivedi P, Hertzog PJ, Salvetti M, Farina C, Coccia EM. A cell type-specific transcriptomic approach to map B cell and monocyte type I interferon-linked pathogenic signatures in Multiple Sclerosis. J Autoimmun. 2019;101:1-16.
- 11: La Starza S, Ferraldeschi M, Buscarinu MC, Romano S, Fornasiero A, **Mechelli R**, Umeton R, Ristori G, Salvetti M. Genome-Wide Multiple Sclerosis Association Data and Coagulation. Front Neurol. 2019;10:95.
- 12: Agresti C, **Mechelli R**, Olla S, Veroni C, Eleuteri C, Ristori G, Salvetti M. Oxidative Status in Multiple Sclerosis and Off-Targets of Antioxidants: The Case of Edaravone. Curr Med Chem. 2020;27(13):2095-2105.

- 13: Castaldo I, De Rosa M, Romano A, Zuchegna C, Squitieri F, **Mechelli R**, Peluso S, Borrelli C, Del Mondo A, Salvatore E, Vescovi LA, Migliore S, De Michele G, Ristori G, Romano S, Avvedimento EV, Porcellini A. DNA damage signatures in peripheral blood cells as biomarkers in prodromal huntington disease. *AnnNeurol*. 2019 Feb;85(2):296-301.
- 14: Annibali V, Umeton R, Palermo A, Severa M, Etna MP, Giglio S, Romano S, Ferraldeschi M, Buscarinu MC, Vecchione A, Annese A, Policano C, **Mechelli R**, Pizzolato Umeton R, Fornasiero A, Angelini DF, Guerrero G, Battistini L, Coccia EM, Salvetti M, Ristori G. Analysis of coding and non-coding transcriptome of peripheral B cells reveals an altered interferon response factor (IRF)-1 pathway in multiple sclerosis patients. *J Neuroimmunol*. 2018 Nov 15;324:165-171.
- 15: Srinivasan S, Severa M, Rizzo F, Menon R, Brini E, **Mechelli R**, Martinelli V, Hertzog P, Salvetti M, Furlan R, Martino G, Comi G, Coccia EM, Farina C. Author Correction: Transcriptional dysregulation of Interferome in experimental and human Multiple Sclerosis. *Sci Rep*. 2018 May 11;8(1):7615.
- 16: Buscarinu MC, Romano S, **Mechelli R**, Pizzolato Umeton R, Ferraldeschi M, Fornasiero A, Reniè R, Cerasoli B, Morena E, Romano C, Loizzo ND, Umeton R, Salvetti M, Ristori G. Intestinal Permeability in Relapsing-Remitting Multiple Sclerosis. *Neurotherapeutics*. 2018 Jan;15(1):68-74.
- 17: Srinivasan S, Severa M, Rizzo F, Menon R, Brini E, **Mechelli R**, Martinelli V, Hertzog P, Salvetti M, Furlan R, Martino G, Comi G, Coccia EM, Farina C. Transcriptional dysregulation of Interferome in experimental and human Multiple Sclerosis. *Sci Rep*. 2017 Aug 21;7(1):8981.
- 18: Eleuteri C, Olla S, Veroni C, Umeton R, **Mechelli R**, Romano S, Buscarinu MC, Ferrari F, Calò G, Ristori G, Salvetti M, Agresti C. A staged screening of registered drugs highlights remyelinating drug candidates for clinical trials. *Sci Rep*. 2017 Apr 7;7:45780.
- 19: Giacomini E, Rizzo F, Etna MP, Cruciani M, **Mechelli R**, Buscarinu MC, Pica F, D'Agostini C, Salvetti M, Coccia EM, Severa M. Thymosin- α 1 expands deficient IL-10-producing regulatory B cell subsets in relapsing-remitting multiple sclerosis patients. *Mult Scler*. 2018 Feb;24(2):127-139.
- 20: Rizzo F, Giacomini E, **Mechelli R**, Buscarinu MC, Salvetti M, Severa M, Coccia EM. Interferon- β therapy specifically reduces pathogenic memory B cells in multiple sclerosis patients by inducing a FAS-mediated apoptosis. *Immunol Cell Biol*. 2016 Oct;94(9):886-894.
- 21: Chiara M, Manzari C, Lionetti C, **Mechelli R**, Anastasiadou E, Chiara Buscarinu M, Ristori G, Salvetti M, Picardi E, D'Erchia AM, Pesole G, Homer DS. Geographic Population Structure in Epstein-Barr Virus Revealed by Comparative Genomics. *Genome Biol Evol*. 2016 Dec 14;8(11):3284-3291.
- 22: Buscarinu MC, Cerasoli B, Annibali V, Policano C, Lionetto L, Capi M, **Mechelli R**, Romano S, Fornasiero A, Mattei G, Piras E, Angelini DF, Battistini L, Simmaco M, Umeton R, Salvetti M, Ristori G. Altered intestinal permeability in patients with relapsing-remitting multiple sclerosis: A pilot study. *Mult Scler*. 2017 Mar;23(3):442-446.
- 23: Falabella M, Forte E, Magnifico MC, Santini P, Arese M, Giuffrè A, Radić K, Chessa L, Coarelli G, Buscarinu MC, **Mechelli R**, Salvetti M, Sarti P. Evidence for Detrimental Cross Interactions between Reactive Oxygen and Nitrogen Species in Leber's Hereditary Optic Neuropathy Cells. *Oxid Med Cell Longev*. 2016;2016:3187560.
- 24: Ristori G, **Mechelli R**, Salvetti M. Association between vaccines and neuroinflammation: time, risks, and benefits. *JAMA Neurol*. 2015 May;72(5):605.
- 25: Ricigliano VA, Handel AE, Sandve GK, Annibali V, Ristori G, **Mechelli R**, Cader MZ, Salvetti M. EBNA2 binds to genomic intervals associated with multiple sclerosis and overlaps with vitamin D receptor occupancy. *PLoS One*. 2015;10(4):e0119605.
- 26: **Mechelli R**, Manzari C, Policano C, Annese A, Picardi E, Umeton R, Fornasiero A, D'Erchia AM, Buscarinu MC, Agliardi C, Annibali V, Serafini B, Rosicarelli B, Romano S, Angelini DF, Ricigliano VA, Buttari F, Battistini L, Centonze D, Guerini FR, D'Alfonso S, Pesole G, Salvetti M, Ristori G. Epstein-Barr virus genetic variants are associated with multiple sclerosis. *Neurology*. 2015;84(13):1362-8.
- 27: Rinaldi AO, Sanseverino I, Purificato C, Cortese A, **Mechelli R**, Francisci S, Salvetti M, Millefiorini E, Gessani S, Gauzzi MC. Increased circulating levels of vitamin D binding protein in MS patients. *Toxins (Basel)*. 2015;7(1):129-37.
- 28: Annibali V, **Mechelli R**, Romano S, Buscarinu MC, Fornasiero A, Umeton R, Ricigliano VA, Orzi F, Coccia EM, Salvetti M, Ristori G. IFN- β and multiple sclerosis: from etiology to therapy and back. *Cytokine Growth Factor Rev*. 2015;26(2):221-8.
- 29: Calabrese R, Valentini E, Ciccarone F, Guastafierro T, Bacalini MG, Ricigliano VA, Zampieri M, Annibali V, **Mechelli R**, Franceschi C, Salvetti M, Caiafa P. TET2 gene expression and 5-hydroxymethylcytosine level in multiple sclerosis peripheral blood cells. *Biochim Biophys Acta*. 2014 Jul;1842(7):1130-6.
- 30: Camperio C, Muscolini M, Volpe E, Di Mitri D, **Mechelli R**, Buscarinu MC, Ruggieri S, Piccolella E, Salvetti M, Gasperini C, Battistini L, Tuosto L. CD28 ligation in the absence of TCR stimulation up-regulates IL-17A and pro-inflammatory cytokines in relapsing-remitting multiple sclerosis T lymphocytes. *Immunol Lett*. 2014;158(1-2):134-42.
- 31: **Mechelli R**, Vittori D, Coarelli G, Aimati L, De Luca O, Romano S, Ricigliano VA, Annibali V, Policano C, Mattei C, Salvetti M, Ristori G. Screening for neurotropic viruses in cerebrospinal fluid of patients with multiple sclerosis and other neurological diseases. *Mult Scler*. 2014;20(5):638.
- 32: Lolli F, Martini H, Citro A, Franceschini D, Portaccio E, Amato MP, **Mechelli R**, Annibali V, Sidney J, Sette A, Salvetti M, Barnaba V. Increased CD8+ T cell responses to apoptotic T cell-associated antigens in multiple sclerosis. *J Neuroinflammation*. 2013 Jul 27;10:94.
- 33: **Mechelli R**, Umeton R, Policano C, Annibali V, Coarelli G, Ricigliano VA, Vittori D, Fornasiero A, Buscarinu MC; International Multiple Sclerosis Genetics Consortium; Wellcome Trust Case Control Consortium,2, Romano S, Salvetti M, Ristori G. A "candidate-interactome" aggregate analysis of genome-wide association data in multiple sclerosis. *PLoS One*. 2013;8(5):e63300.
- 34: Bordi I, Umeton R, Ricigliano VA, Annibali V, **Mechelli R**, Ristori G, Grassi F, Salvetti M, Suter A. A mechanistic, stochastic model helps understand multiple sclerosis course and pathogenesis. *Int J Genomics*. 2013;2013:910321.
- 35: Giacomini E, Severa M, Rizzo F, **Mechelli R**, Annibali V, Ristori G, Ricciari V, Salvetti M, Coccia EM. IFN- β therapy modulates B-cell and monocyte crosstalk via TLR7 in multiple sclerosis patients. *Eur J Immunol*. 2013 Jul;43(7):1963-72.
- 36: Angelini DF, Serafini B, Piras E, Severa M, Coccia EM, Rosicarelli B, Ruggieri S, Gasperini C, Buttari F, Centonze D, **Mechelli R**, Salvetti M, Borsellino G, Aloisi F, Battistini L. Increased CD8+ T cell response to Epstein-Barr virus lytic antigens in the active phase of multiple sclerosis. *PLoS Pathog*. 2013;9(4):e1003220.
- 37: Boggio E, Melensi M, Bocca S, Chiocchetti A, Comi C, Clemente N, Orliieri E, Soluri MF, D'Alfonso S, **Mechelli R**, Gentile G, Poggi A, Salvetti M, Ramenghi U, Dianzani U. The -346T polymorphism of the SH2D1A gene is a risk factor for development of autoimmunity/lymphoproliferation in males with defective Fas function. *Hum Immunol*.

2012;73(5):585-92.

38: Calabrese R, Zampieri M, **Mechelli R**, Annibali V, Guastafierro T, Ciccarone F, Coarelli G, Umeton R, Salvetti M, Caiafa P. Methylation-dependent PAD2 upregulation in multiple sclerosis peripheral blood. *Mult Scler*. 2012;18(3):299-304.

39: **Mechelli R**, Anderson J, Vittori D, Coarelli G, Annibali V, Cannoni S, Aloisi F, Salvetti M, James JA, Ristori G. Epstein-Barr virus nuclear antigen-1 B-cell epitopes in multiple sclerosis twins. *Mult Scler*. 2011;17(11):1290-4.

40: Bergamaschi L, Ban M, Barizzzone N, Leone M, Ferrante D, Fasano ME, Guerini FR, Corrado L, Naldi P, Dametto E, Agliardi C, Salvetti M, **Mechelli R**, Galimberti D, Scarpini E, Cavalla P, Bargiggia V, Caputo D, Cordera S, Monaco F, Momigliano-Richiardi P, D'Alfonso S. Association of HLA class I markers with multiple sclerosis in the Italian and UK population: evidence of two independent protective effects. *J Med Genet*. 2011 Jul;48(7):485-92.

41: Annibali V, Ristori G, Angelini DF, Serafini B, **Mechelli R**, Cannoni S, Romano S, Paolillo A, Abderrahim H, Diamantini A, Borsellino G, Aloisi F, Battistini L, Salvetti M. CD161(high)CD8+T cells bear pathogenetic potential in multiple sclerosis. *Brain*. 2011;134(Pt 2):542-54.

42: Ristori G, **Mechelli R**, Anderson J, Mengoni F, Sauzullo I, Annibali V, Cannoni S, Aloisi F, James JA, Salvetti M. Antiviral immune response in patients with multiple sclerosis, healthy siblings and twins. *Mult Scler*. 2010;16(12):1527-8.

43: **Mechelli R**, Annibali V, Ristori G, Vittori D, Coarelli G, Salvetti M. Multiple sclerosis etiology: beyond genes and environment. *Expert Rev Clin Immunol*. 2010;6(3):481-90.

44: Pisano S, Marchioni E, Galati A, Mechelli R, Savino M, Cacchione S. Telomeric nucleosomes are intrinsically mobile. *J Mol Biol*. 2007;369(5):1153-62.

45: Annibali V, Ristori G, Cannoni S, Romano S, Visconti A, Ghazaryan A, Figà Talamanca L, Salvetti M, **Mechelli R**. Multiple sclerosis: pharmacogenomics and personalised drug treatment. *Neurol Sci*. 2006 Sep;27 Suppl 5:S347-9.

46: **Mechelli R**, Anselmi C, Cacchione S, De Santis P, Savino M. Organization of telomeric nucleosomes: atomic force microscopy imaging and theoretical modeling. *FEBS Lett*. 2004 May 21;566(1-3):131-5.

47: Cacchione S, Luis Rodríguez J, **Mechelli R**, Franco L, Savino M. Acetylated nucleosome assembly on telomeric DNAs. *Biophys Chem*. 2003 Jun 1;104(2):381-92.

Rome, 08 May 2022