

Disease Modifying Therapy—Part 1

- P1** Treatment by glatiramer acetate improves cell therapy in experimental autoimmune encephalomyelitis
R. Aharoni (Rehovot, Israel), R. Sarig, R. Eilam, D. Yaffe, R. Arnon
- P2** Plasma exchange after immunosuppressive treatment failure in neuromyelitis optica
S. Apóstolos-Pereira (São Paulo, Brazil), F. Borlot, F. Kok, D. Callegaro, P. Marchiori for BCTRIMS
- P3** Short-term immunosuppression with mitoxantrone followed by long-term glatiramer acetate vs. glatiramer acetate alone: Results at 36 months in patients with relapsing multiple sclerosis
D. Arnold (Montréal, Québec, Canada), A. Bar-Or, D. Campagnolo, H. Panitch, T. Vollmer
- P4** Use of monthly cyclophosphamide and methylprednisolone in rapidly progressive multiple sclerosis: pilot study
G. Arrambide (Mexico City, Mexico), J. Flores, T. Corona
- P5** Therapeutical approaches in childhood multiple sclerosis
S. Asimiadou (Berlin, Germany), J. Haas
- P6** Comparison of two sources of Interferon B 1a to induce increases in vascular cell adhesion molecule
N. Barroso (Mexico, Mexico), N. Santos, M. De la Maza, J. Perez, L. Nuñez, J. Perez, J. Nader, C. Uribe, J. Revilla, A. Molina
- P7** Intravital 2-photon imaging of encephalitogenic effector cells during fingolimod (FTY720) treatment of experimental autoimmune encephalomyelitis
I. Bartholomäus (Martinsried, Germany), C. Schläger, V. Brinkmann, H. Wekerle, A. Flügel
- P8** Effect of natalizumab on relapses in patients with relapsing multiple sclerosis who experience MRI activity during treatment
D. Bates (Newcastle upon Tyne, United Kingdom), E. Bartholome, A. Pace, R. Hyde, C. Hotermans
- P9** Glatiramer acetate in treatment-naïve and immunomodulatory pre-treated relapsing-remitting multiple sclerosis patients
U. Baumhackl (St. Poelten, Austria), M. Pantev, M. Klasser for the Copaxone Research Group Austria
- P10** Escalating treatment of optic neuritis by repeated high-dose corticosteroid-therapies and plasma exchange in pediatric multiple sclerosis
A. Bayas (Augsburg, Germany), D. Dunstheimer, H. Weihprecht, J. Penzien, M. Naumann, P. Heidemann
- P11** There is no rebound worsening of multiple sclerosis after stopping disease-modifying therapies
K. Bejaoui (Marshfield, Wisconsin, USA), L. Rolak, C. Matti, D. Foss
- P12** Disease modifying therapies prevent secondary progression in multiple sclerosis patients
R. Bergamaschi (Pavia, Italy), M. Amato, S. Quaglini, E. Tavazzi, D. Paolicelli, E. Portaccio, M. Trojano
- P13** Clinical response to glatiramer acetate in interferon beta-resistant relapsing-remitting multiple sclerosis patients
P. Bermejo (Madrid, Spain), C. Oreja-Guevara, A. Miralles, M. Aguilar, E. Diez-Tejedor
- P14** Avonex® 15-year long-term follow-up study of patients with relapsing multiple sclerosis
R. Bermel (Cleveland, Ohio, USA), B. Weinstock-Guttman, D. Bourdette, R. Rudick, H. Zhang, P. Foulds
- P15** Retrospective study to assess the efficacy and safety of mitoxantrone in multiple sclerosis patients with different therapy courses
I. Bonaventura (Terrassa, Spain), M. Marco, S. Romero, S. Quintana, T. Delgado
- P16** Characterization of a novel sphingosine-1-phosphate-1 receptor agonist with activity in experimental autoimmune encephalomyelitis
P. Bousquet (Worcester, Massachusetts, USA), C. Nelson, E. Kuzmin, R. Stoffel, K. Cusack, Y. Tian, W. Waegell, R. Goudreau, S. Fix, D. Konopacki, T. Gordon, M. Hayes, P. Grongsaard, X. Zhang, L. Schaffter, G. Wallace, B. McRae
- P17** Alemtuzumab Phase 2 Extension Study Design (CAMMS223): Assessing long-term outcomes and potential benefits of additional alemtuzumab treatment in patients with relapsing-remitting multiple sclerosis
V. Brinar (Zagreb, Croatia) for the CAMMS223 Study Group
- P18** Estimates of disease-modifying-drug effect size in relapsing-onset multiple sclerosis tend to decline as disability severity, years since onset and treatment years increase
M. Brown (Halifax, Nova Scotia, Canada), S. Kirby, C. Skedgel, I. Sketris, J. Murray, J. Fisk, V. Bhan for the Dalhousie MS Research Group
- P19** Autologous non-myeloablative hematopoietic stem cell transplantation for relapsing-remitting multiple sclerosis
R. Burt (Chicago, Illinois, USA), B. Cohen, D. Stefoski, R. Balabanov, G. Katsamakias, J. Rose, A. Testori, P. Muraro, J. Storek, J. Voltarelli
- P20** A Phase I/II dose-escalation trial of oral vitamin D3 with calcium supplementation in patients with multiple sclerosis
J. Burton (Toronto, Ontario, Canada), S. Kimball, R. Vieth, A. Bar-Or, H. Dosch, L. Thibault, S. Kilborn, C. D'Souza, R. Cheung, M. Ursell, P. O'Connor
- P21** Immunomodulatory therapy reduces the development of inflammatory cortical lesions in relapsing-remitting multiple sclerosis
M. Calabrese (Padova, Italy), V. Bernardi, F. Rinaldi, M. Atzori, I. Mattisi, A. Favaretto, L. Barachino, C. Romualdi, L. Rinaldi, P. Perini, P. Gallo
- P22** An open-label study of high dose cyclophosphamide for moderate to severe refractory multiple sclerosis
D. Callegaro (São Paulo, Brazil), S. Apóstolos-Pereira, M. Scaff, P. Marchiori for BCTRIMS
- P23** Cutaneous necrosis in multiple sclerosis patients: misuse of interferon beta or individual susceptibility?
W. Camu (Montpellier, France), B. Carlander, M. Charif, G. Taieb, C. Geny, E. Thouvenot

POSTER SESSION 1

- P24** Evaluating patient satisfaction on transition from subcutaneous interferon beta-1a to a new human serum albumin-free formulation: the TRANSFER study
W. Camu (Montpellier, France) for the TRANSFER Study Group
- P25** Compliance and complications after 5 years of continual therapy with interferon-beta or glatiramer acetate in relapsing-remitting multiple sclerosis
C. Caon (Detroit, Michigan, USA), D. Lisak, R. Penmesta, S. Hreha, K. Xiufang, A. Tselis, R. Lisak, O. Khan
- P26** The impact of long-term treatment with disease modifying therapy on disability progression in relapsing-remitting multiple sclerosis patients
A. Carrá (Buenos Aires, Argentina), P. Onaha, V. Sinay, M. Halfon
- P27** The risk of optic neuritis during immunomodulatory treatment in relapsing-remitting multiple sclerosis patients
A. Carrá (Buenos Aires, Argentina), P. Onaha, P. Goyeneche
- P28** The MS-STAT trial: a Phase II trial of high dose simvastatin in secondary progressive multiple sclerosis
J. Chataway (London, United Kingdom), D. Chan, V. Anderson, B. Polito, C. Kallis, C. Frost, V. Calder, J. Greenwood, R. Nicholas for the Multiple Sclerosis Trials Collaboration (MSTC)
- P29** S1P₁ receptor signaling on cells of astrocytic lineages in experimental autoimmune encephalomyelitis: a role in disease progression and the efficacy of fingolimod (FTY720)
J. Choi, D. Herr, C. Lee, S. Teo, G. Kennedy, J. Chun (La Jolla, California, USA)
- P30** Oral fingolimod (FTY720) versus interferon beta-1a in relapsing-remitting multiple sclerosis: baseline patient demographics and disease characteristics from a Phase III trial (TRANSFORMS)
J. Cohen (Cleveland, Ohio, USA), J. Pelletier, L. Kappos, X. Montalban, H. Hartung, G. Comi, B. Khatri, F. Barkhof, T. Stites, H. Pohlmann, V. Dong for the TRANSFORMS Study Group
- P31** Oral laquinimod in patients with relapsing-remitting multiple sclerosis: 9-month double-blind active extension of the multi-center, randomized, double-blind, parallel-group placebo-controlled study
G. Comi (Milan, Italy), O. Abramsky, T. Arbizu, A. Boyko, R. Gold, E. Havrdová, S. Komoly, K. Selmaj, B. Sharrack, M. Filippi for the LAQ/5062 Clinical Advisory Board and Study Group
- P32** Treatment with glatiramer acetate delays conversion to clinically definite multiple sclerosis in patients with clinically isolated syndrome: subgroup analyses
G. Comi (Milan, Italy), A. Carrá, F. Fazekas, P. Rieckmann, O. Bajenaru, J. Hillert, I. Elovaara, C. Young, D. Wynn, J. King, C. Lubetzki, H. Hartung, K. Myhr, X. Montalban, S. Komoly, M. Filippi for the PreCISe Study Group
- P33** Rationale for the use of multipotent mesenchymal stromal cells in multiple sclerosis
P. Connick (Cambridge, United Kingdom), M. Kolappan, D. Miller, A. Compston, S. Chandran
- P34** DMT adherence in the VHA MS Surveillance Registry
W. Culpepper (Baltimore, Maryland, USA), C. Bever, M. Wallin, T. McDowell, D. Bradham
- P35** Serum ferritin levels and β -interferon treatment in multiple sclerosis: a clue for interferon liver toxicity
D. Dive (Esneux, Belgium), C. Ernon, S. Gillet
- P36** JC virus in multiple sclerosis patients treated with natalizumab
M. Dominguez-Mozo (Madrid, Spain), R. Alvarez-Lafuente, M. Garcia-Montojo, V. De las Heras, F. Bartolome, R. Arroyo
- P37** Mitoxantrone treatment of multiple sclerosis patients enhances in vitro TH2 type cytokine production
A. Dressel (Greifswald, Germany), S. Rosenberg, S. Skrzipek, B. Bröker
- P38** Therapy-related acute leukemia with mitoxantrone: what is the risk and can we minimize it?
R. Ellis (Liverpool, United Kingdom), M. Boggild
- P39** A multicenter, open label, non-comparative trial investigating the recovering of IFN-beta efficacy in breakthrough relapsing-remitting multiple sclerosis patients with neutralizing IFN-beta antibodies (RECOVER)
J. Erälänna (Turku, Finland), J. Hillert, K. Myhr, C. Madsen, T. Petersen for the RECOVER Study Group
- P40** Evaluation of activity, aggregation and NAB testing with generic interferon beta products: implications for treating multiple sclerosis
R. Farrell (London, United Kingdom), M. Wadhwa, V. Worthington, P. Creeke, R. Thorpe, P. Dilger, G. Giovannoni, A. Meager
- P41** Risk-benefit assessment of concurrent slow dose of mitoxantrone to control active multiple sclerosis under interferon beta-1a: an exploratory study
O. Fernández (Málaga, Spain), R. Arroyo, F. Coret, M. Hernández, G. Izquierdo, D. Muñoz, A. Rodríguez-Antigüedad, J. Correia de Sá, R. Pedrosa for the Iberian Collaborative Group
- P42** Therapeutic plasma exchange for steroid unresponsive multiple sclerosis relapses: a long term follow-up observation
M. Fischer (Bochum, Germany), A. Schröder, G. Ellrichmann, B. Peter, C. Meyer, R. Linker, A. Chan, R. Gold
- P43** Persistency of neutralizing antibodies against interferon beta after discontinued treatment in patients with multiple sclerosis
A. Fogdell-Hahn (Stockholm, Sweden), M. Lundkvist, A. Sominanda, J. Hillert
- P44** Continuous long-term immunomodulatory therapy in relapsing multiple sclerosis: results from the 15-year analysis of the US prospective open-label study of glatiramer acetate
C. Ford (Albuquerque, New Mexico, USA), K. Johnson, N. Kachuck, J. Lindsey, R. Lisak, C. Luzzio, L. Myers, H. Panitch, J. Preiningerova, A. Pruitt, J. Rose, H. Rus, J. Wolinsky for the Copaxone Study Group
- P45** Cognition, fatigue, depression and health-related quality of life in early multiple sclerosis: baseline data from CogniMS, a multinational longitudinal study
S. Fredrikson (Huddinge, Sweden), E. Wicklein, K. Kim, N. Prayoonwiwat, P. Scherer, D. Langdon

- P46** High intensity immunoablation and autologous stem cell treatment for aggressive multiple sclerosis can improve quality of life and fatigue
M. Freedman (Ottawa, Ontario, Canada), H. Atkins, M. Bowman for the Canadian MS Bone Marrow Transplant Group
- P47** Withdrawn
- P48** Clinical effect of the neuroprotectant MN-166 in relapsing multiple sclerosis: year 2 data
R. Gammans (San Diego, California, USA), F. Barkhof, J. Drulovic for the MN-166-CL-001 Investigators
- P49** Three pleiotropic acting recombinant interferon beta agents display pharmacologically varying RNA expression over time
R. Goertsches (Rostock, Germany), M. Hecker, D. Koczan, H. Thiesen, U. Zettl
- P50** Safety profile of BG00012, an oral formulation of dimethyl fumarate for patients with relapsing MS
R. Gold (Bochum, Germany), L. Kappos, D. Miller, E. Havrdova, V. Limmroth, C. Polman, M. Eraksoy, E. Meluzinova, I. Rektor, M. Yang, J. Morganroth, N. Lunde, K. Dawson, G. O'Neill
- P51** Association of interferon beta and inosine in relapsing-remitting multiple sclerosis (ASIIIMS): a multi-centre, randomized, double-blind, placebo-controlled phase II [proof of concept] trial in 157 patients
R. Gonsette (Melsbroek, Belgium), C. Sindic, M. D'Hooghe, R. Medaer, A. Michotte, P. De Deyn, P. Seelldrayers, D. Guillaume, R. Metz, A. Maertens de Noordhout, M. Dupuis, P. Cras, D. Decoo, M. Van Zandijcke for the ASIIIMS Study Group
- P52** Early treatment with interferon beta-1b associated with improved long-term outcome in multiple sclerosis
D. Goodin (San Francisco, California, USA), G. Ebers, A. Reder, A. Traboulsee, D. Langdon, K. Beckmann, A. Konieczny, J. Jones
- P53** Identification and characterization of mefloquine efficacy against JC virus in vitro
M. Brickelmaier, N. Allaire, L. Gorelik (Cambridge, Massachusetts, USA)
- P54** Assessment of the utility of the Canadian Treatment Optimization Recommendations (CanTOR) in the routine care of multiple sclerosis
F. Grand'Maison (Greenfield Park, Québec, Canada), M. Freedman, A. Traboulsee, V. Bhan, M. Myles, D. Patry, D. Selchen for the CanTOR investigators
- P55** Preferential effects of cladribine on lymphocyte subpopulations
J. Guarnaccia (Derby, Connecticut, USA), H. Rinder, B. Smith
- P56** Investigation of the effect of early initiation of therapy with interferon beta-1a (i.m.) on disease course, quality of life and cognition in patients with relapsing-remitting multiple sclerosis
J. Haas (Berlin, Germany) for the Study Group "Frühe Initiale Therapie bei MS" (Early Initial Therapy in MS)
- P57** Long-term follow-up of immunomodulatory therapies in early relapsing-remitting multiple sclerosis
J. Haas (Berlin, Germany)
- P58** Long-term maintenance treatment with glatiramer acetate after mitoxantrone in rapidly progressive multiple sclerosis
Y. Handouk (Ancona, Italy), V. Angelieri, M. Danni, S. De Riso, L. Provinciali
- P59** Feasibility of using autologous neural progenitors as a regenerative strategy in multiple sclerosis
N. Chhua, P. Good, V. Harris (New York, New York, USA), S. Sadiq
- P60** Risk tolerance in multiple sclerosis patients: a re-survey to assess stability and change
E. Hartman (Cleveland, Ohio, USA), J. Lee, D. Miller, M. Kattan, R. Fox
- P61** Phase 2 follow-up results of the BHT-3009 DNA vaccine for multiple sclerosis
E. Havrdová (Prague, Czech Republic), E. Krasulova, C. Nadj, K. Selmaj, J. Losy, I. Nadj, E. Radue, J. Gianettoni, F. Valone, P. Utz, W. Robinson, L. Steinman, H. Garren for the BHT-3009 Study Group
- P62** Natalizumab increases the proportion of disease-free patients in relapsing multiple sclerosis
E. Havrdova (Prague, Czech Republic), D. Bates, S. Galetta, G. Giovannoni, F. Lublin, P. O'Connor, J. Phillips, C. Polman, D. Stefoski, A. Pace, R. Hyde, R. Kim, M. Panzara
- P63** Acute myelogenous leukemia in MS patients with sequential treatment by mitoxantrone and azathioprine: is there a synergistic or addictive effect?
I. Slesari, O. Heinzlef (Poissy, France), T. De Revel, J. Pelletier
- P64** Long-term follow-up study of very active multiple sclerosis (MS) patients under interferon beta-1b therapy
O. Heinzlef (Poissy, France), I. Slesari, A. Olivier, M. Debouverie, J. Deseze, P. Vermersch, P. Hautecoeur, C. Giannesini
- P65** Immunomodulatory effects on postpartum relapse rate in patients with multiple sclerosis a comparison between three groups
K. Hellwig (Bochum, Germany), C. Beste, S. Schimrigk, A. Chan, R. Gold
- P66** Antibodies to native myelin oligodendrocyte glycoprotein do not predict progression from clinically isolated syndrome to multiple sclerosis: complete analysis of the BEtaferon® in Newly Emerging multiple sclerosis For Initial Treatment (BENEFIT) study
B. Hemmer (Muenchen, Germany), G. Edan, M. Freedman, H. Hartung, L. Kappos, D. Miller, X. Montalban, C. Polman, J. Kuhle, S. Nessler, D. Zhou, L. Bauer, V. Lanius, C. Metzger, C. Pohl, R. Sandbrink
- P67** Antibodies to aquaporin-4 in patients with a clinically isolated syndrome: analyses from the BENEFIT study (BEtaferon® in Newly Emerging multiple sclerosis For Initial Treatment)
A. Horga (Barcelona, Spain), B. Hemmer, G. Edan, M. Freedman, H. Hartung, L. Kappos, D. Miller, X. Montalban, C. Polman, S. Nessler, L. Bauer, V. Lanius, C. Metzger, C. Pohl, R. Sandbrink
- P68** Electronic tool to optimize multiple sclerosis treatment
G. Izquierdo (Sevilla, Spain), J. Ruiz Peña for the OPTIMAX Collaborative Group

POSTER SESSION 1

- P69** Breakthrough relapses after rituximab in NMO patients: incidence and other treatment options
A. Javed (Chicago, Illinois, USA), B. Arnason, A. Reder
- P70** Benefit/risk evaluation of mitoxantrone and natalizumab in multiple sclerosis
D. Jeffery (Winston-Salem, North Carolina, USA), D. Wynn, R. Bennett, A. Al-Sabbagh, D. Bandari
- P71** Recurrent autoimmune thrombocytopenia after exposure to interferon beta-1a and natalizumab
D. Jones (Worcester, Massachusetts, USA), C. Ionete
- P72** Oral fingolimod (FTY720) in patients with relapsing multiple sclerosis: 3-year results from a phase II study extension
L. Kappos (Basel, Switzerland), E. Radue, P. O'Connor, X. Montalban, J. Antel, G. Karlsson, H. Pohlmann, A. de Vera, G. Comi for the FREEDOMS Study Group
- P73** Oral fingolimod (FTY720) in relapsing-remitting multiple sclerosis: baseline patient demographics and disease characteristics from a 2-year phase III trial (FREEDOMS)
L. Kappos (Basel, Switzerland), C. Polman, E. Radue, P. O'Connor, P. Calabresi, R. Hohlfeld, C. Agoropoulou, H. Pohlmann, A. de Vera
- P74** Efficacy and safety of natalizumab in children with highly active relapsing-remitting multiple sclerosis
K. Karageorgiou (Athens, Greece), M. Polyzois, M. Tzitzika, I. Xatzi, A. Alexoudi
- P75** Treatment of multiple sclerosis with glatiramer acetate and albuterol: results of a clinical trial
P. Kivisäkk, V. Viglietta, B. Healy, G. Buckle, H. Weiner, D. Hafler, S. Khoury (Boston, Massachusetts, USA)
- P76** Magnetic resonance imaging activity predicts multiple sclerosis patients' response to treatment with interferon beta-1a
R. Kinkel (Boston, Massachusetts, USA), P. O'Connor, J. Simon, J. Carulli, M. del Carmen Castrillo, S. Goelz, R. Hyde, S. Lanker, A. Pace, A. Sandrock, H. Zhang
- P77** Worsening of lupus symptoms after IFN- β 1a injections in a patient with MS and systemic lupus erythematosus
D. Anbarasan, I. Kister (New York, New York, USA), J. Herbert
- P78** Immunoablative therapy with autologous hematopoietic stem cell transplantation in the treatment of poor-risk multiple sclerosis
T. Kozak (Prague, Czech Republic), E. Havrdova, M. Trnny, J. Pitha, E. Krasulova, P. Lhotakova, P. Kobylka, Z. Trnkova, J. Fiedler, V. Koza
- P79** Efficacy of interferon beta treatment and the role of magnetic resonance imaging in Korean multiple sclerosis patients
J. Kwak (Seoul, South Korea), J. An, J. Min, K. Shin, M. Park, B. Kim, K. Lee
- P80** Cladribine exerts a modulatory effect on T-cell activation
B. Laugel (Geneva, Switzerland), J. Challier, C. Siegfried, Y. Chvatchko, R. Weissert, L. Galibert
- P81** Could long-term therapy with interferon beta-1b induce pulmonary arterial hypertension? a case report
A. Ledinek (Ljubljana, Slovenia), U. Rot, S. Segar
- P82** Inappropriate use of immunomodulatory therapy in severely disabled patients with progressive multiple sclerosis
R. Lonergan (Dublin, Ireland), K. Doyle, M. Duggan, S. Jordan, M. Hutchinson, N. Tubridy
- P83** Reactivation of BK virus during natalizumab therapy in relapsing-remitting multiple sclerosis
R. Lonergan (Dublin, Ireland), L. Costelloe, J. Fletcher, C. De Gascun, M. Carr, S. Coughlan, A. Waters, M. Duggan, K. Doyle, S. Jordan, W. Hall, M. Hutchinson, N. Tubridy
- P84** Cerebrospinal fluid cell phenotypic analysis from a phase 2 trial of the BHT-3009 DNA vaccine for multiple sclerosis
C. Nadj (Novi Sad, Serbia), I. Nadj, E. Havrdova, E. Krasulova, K. Selmaj, J. Losy, E. Radue, J. Gianettoni, N. Solvason, K. Tersini, F. Valone, P. Utz, W. Robinson, L. Steinman, H. Garren for the BHT-3009 Study Group
- P85** Effects of subcutaneous interferon beta-1a on disease parameters and cognition in patients with early relapsing-remitting multiple sclerosis: longitudinal clinical and cognitive results from the COGIMUS (COGnition Impairment in MULTiple Sclerosis) study
F. Patti (Catania, Italy), M. Pia Amato, M. Tola, M. Trojano, P. Ferrozza, O. Picconi, S. Bastianello for the COGIMUS Study Group
- P86** Betaferon®/Betaseron® in the early relapsing-remitting multiple sclerosis surveillance trial (BEST): data from all patients completing 2 years of treatment
U. Pohlmann (Basel, Switzerland), L. Kappos, C. Meier
- P87** Oral fingolimod (FTY720) reduces the severity of experimental autoimmune encephalomyelitis and protects against disease progression
A. Schubart (Basel, Switzerland), T. Seabrook, M. Rausch, A. Mir
- P88** In vitro immunomodulation by quercetin and interferon- β in multiple sclerosis patients
Z. Sternberg (Buffalo NY, New York, USA), K. Chadha, A. Lieberman, D. Hojnacki, P. Zamboni, A. Drake, E. Grazioli, B. Weinstock-Guttman, F. Munschauer
- P89** Breakthrough disease in pediatric multiple sclerosis patients: a pediatric network experience
E. Yeh (Buffalo, New York, USA), J. Ness, B. Weinstock-Guttman, A. Belman, Y. Patel, L. Krupp

Epidemiology/Genetics—Part 1

- P90** Epidemiological evidence of multiple sclerosis in Ecuador
E. Abad (Quito, Ecuador), M. Pérez, T. Alarcón, E. Castro, F. Díaz, R. Santibáñez
- P91** NARCOMS Latino cohort
E. Abarca (Phoenix, Arizona, USA), P. Davis, R. Marrie, G. Cutter, D. Campagnolo, T. Vollmer for the CMSC/NARCOMS Registry
- P92** Clinical presentation of relapses in multiple sclerosis during pregnancy and postpartum period: an epidemiological overview in Mexican women
V. Alatraste (Mexico City, Mexico), J. Flores, G. Arrambide, A. Gonzalez, T. Corona

- P93** Acute partial transverse myelitis as index events in relapsing neuromyelitis optica: analysis of 60 patients
M. Alvarenga (Rio de Janeiro, Brazil), L. Thuler, R. Papais-Alvarenga
- P94** Association of IL23R functional polymorphisms with multiple sclerosis
M. Cenit, V. De las Heras, R. Alvarez-Lafuente (Madrid, Spain), R. Arroyo, E. De la Concha, M. Fernandez-Arquero, E. Urcelay, A. Martinez
- P95** Profile of asymptomatic contrast sensitivity loss in multiple sclerosis
C. Araujo (Belo Horizonte, Brazil), M. Lana-Peixoto, L. Simao, M. Moreira for BCTRIMS
- P96** Cigarette smoking and sex ratio of multiple sclerosis
A. Ascherio (Boston, Massachusetts, USA), N. Morozova, H. Brønnum-Hansen
- P97** Low-contrast letter acuity scores reflect vision-specific, health-related quality of life in multiple sclerosis
E. Mowry, M. Loguidice, A. Daniels, D. Jacobs, C. Markowitz, S. Galetta, G. Cutter, M. Maguire, L. Balcer (Philadelphia, Pennsylvania, USA)
- P98** Clinical features of acquired demyelination of the central nervous system in Canadian children
B. Banwell (Toronto, Ontario, Canada), J. Kennedy, M. McGowan, S. Magalhaes, D. Sadovnick, D. Arnold, A. Bar-Or for the Canadian Pediatric Demyelinating Network
- P99** Impact of maternity in the progression of disability in multiple sclerosis
M. Mendibe, B. Ibáñez, J. Barcena (Baracaldo, Spain), A. Antigüedad
- P100** TLR4 haplotypes in multiple sclerosis: a case-control study in the Spanish population
F. Blanco-Kelly, F. Bartolome (Madrid, Spain), E. Urcelay, V. De las Heras, R. Arroyo, R. Alvarez-Lafuente, E. De la Concha, A. Martinez
- P101** KIAA0350 polymorphisms: association with multiple sclerosis in the Spanish population
M. Cenit, A. Martinez, E. De la Concha, E. Urcelay, F. Bartolome (Madrid, Spain), V. De las Heras, R. Alvarez-Lafuente, R. Arroyo
- P102** Matrix metalloproteinase-9 and matrix metalloproteinase-2 gene polymorphisms in multiple sclerosis
Y. Benešová (Brno, Czech Republic), A. Vasku, P. Stourac, M. Hladikova, M. Beránek, Z. Kadanka, J. Bednarik
- P103** Neuromyelitis optica in Brazil: a retrospective study of 41 patients
D. Bichuetti (São Paulo, Brazil), D. OLiveira, N. Souza, R. Rivero, E. Oliveira, A. Gabbai
- P104** An extended Flemish pedigree affected by multiple sclerosis: genome-wide linkage analysis and study of clinical features
T. Breban (Leuven, Belgium), A. Goris, B. Van Wijmeersch, M. D'hooghe, B. Dubois for the Laboratory for Neuroimmunology - Leuven
- P105** Infection with specific strains of Epstein-Barr virus are a risk factor for multiple sclerosis
R. Brennan (Brisbane, Australia), J. Burrows, M. Bell, A. Lenarczyk, P. Csurhes, M. Pender, S. Burrows
- P106** Global expression profiling in multiple sclerosis: a disease of the central nervous system, but with relapses triggered in the periphery?
B. Brynedal (Stockholm, Sweden), M. Khademi, E. Wallström, J. Hillert, T. Olsson, K. Duvefelt
- P107** Genetic analysis of caspase 8 polymorphisms in multiple sclerosis
M. Camiña (Barcelona, Spain), E. Julià, M. Tintoré, C. López, X. Montalban, M. Comabella
- P108** Epigenetic marks in the brain of patients with secondary progressive multiple sclerosis
P. Casaccia (New York, New York, USA), F. Mastronardi
- P109** Age modifies multiple sclerosis phenotype at onset
D. Chabas (San Francisco, California, USA), C. McCulloch, J. Strober, D. Ferriero, E. Waubant
- P110** Comparison of the prevalence of sensorineural hearing loss and the impaired speech reception threshold in multiple sclerosis patients and controls
A. Chitsaz (Isfahan, Iran), M. Etemadifar
- P111** Early treatment to prevent conversion of clinically isolated syndrome to clinically defined multiple sclerosis: a Cochrane metanalysis
M. Clerico (Orbassano (TO), Italy), F. Faggiano, G. Rice, J. Palace, M. Tintoré, L. Durelli
- P112** Factors influencing MS outcome in Sardinia: a clinical and genetic study
E. Cocco (Cagliari, Italy), C. Sardu, R. Piras, E. Mamusa, G. Coghe, G. Fenu, J. Frau, L. Lorefice, R. Murru, F. Cucca, M. Marrosu
- P113** Optic neuritis and contrast letter acuity at baseline in CombiRx
S. Cofield (Birmingham, Alabama, USA), T. Jenkins, R. Conwit, G. Cutter, J. Wolinsky, F. Lublin
- P114** Race, ethnicity, country of origin and infections in CombiRx
S. Cofield (Birmingham, Alabama, USA), G. Cutter, R. Conwit, J. Wolinsky, F. Lublin
- P115** Genome-wide association study using high-density single nucleotide polymorphism arrays on pooled genomic DNA from multiple sclerosis patients responders and non-responders to treatment with interferon-beta
M. Comabella (Barcelona, Spain), M. Craig, J. Río, R. Martin, X. Montalban
- P116** Change of demographic data over time in multiple sclerosis. The Lyon Multiple Sclerosis Cohort experience: Part I: sex ratio
M. Debouverie (Vandoeuvre-lès-Nancy, France), S. Vukusic, C. Ritleng, L. Laforest, E. Van Ganse, C. Confavreux
- P117** Change of demographic data over time in multiple sclerosis. The Lyon Multiple Sclerosis Cohort experience: Part II: age of onset
M. Debouverie (Vandoeuvre-lès-Nancy, France), S. Vukusic, C. Ritleng, L. Laforest, E. Van Ganse, C. Confavreux
- P118** Multiple sclerosis: increase over time in the ratio of women to men in patients with an early onset
E. Roger, P. Duquette (Montréal, Québec, Canada)

POSTER SESSION 1

- P119** Familial multiple sclerosis in Isfahan, Iran
M. Etemadifar (Isfahan, Iran), A. Maghzi, A. Nemati, S. Sajjadi Jazi, A. Chitsaz
- P120** The risk of multiple sclerosis for the offspring of consanguineous mating
M. Etemadifar (Isfahan, Iran), A. Maghzi, N. Chitsaz, M. Kaji Esfahani
- P121** A study of 718 consecutive Greek patients with multiple sclerosis: demographic characteristics, clinical variables and early predictors of disease severity
M. Evangelopoulos (Athens, Greece), G. Koutsis, G. Karachalios, D. Mandellos, E. Andreadou, G. Papadimas, D. Vassilopoulos, C. Sfagos
- P122** MS register in Germany 2008: symptoms of multiple sclerosis
P. Flachenecker (Bad Wildbad, Germany), K. Stuke, U. Zettl, W. Elias, M. Freidel, J. Haas, D. Pitschnau-Michel, S. Schimrigk, P. Rieckmann
- P123** Quality of life in patients with multiple sclerosis: design and first results of a large cross-sectional study in Germany
P. Flachenecker (Bad Wildbad, Germany), M. Freidel, G. Sommer, H. König, S. Kern
- P124** Multiple sclerosis relapses and meteorological factors in a Portuguese population
C. Cordeiro, A. Fonseca (Lisboa, Portugal), A. Valadas, J. Costa, R. Galdes, J. de Sá
- P125** The French prevalence gradient of multiple sclerosis according to gender
A. Fromont (Dijon, France), J. Adnet, L. Clerc, C. Bonithon Kopp, C. Binquet, T. Moreau
- P126** Antiviral activity of interferon beta treatment in multiple sclerosis patients
M. Garcia-Montojo (Madrid, Spain), R. Alvarez-Lafuente, M. Dominguez-Mozo, V. De las Heras, F. Bartolome, R. Arroyo
- P127** Pregnancy reverts the imbalanced expression of inflammation-related genes: the GEXPRIMS study
F. Gilli (Orbassano, Italy), P. Valentino, M. Capobianco, F. Marnetto, S. Malucchi, A. Bertolotto
- P128** Relapses are more frequent in pediatric-onset than adult-onset multiple sclerosis
M. Gorman (Boston, Massachusetts, USA), B. Healy, M. Polgar-Turcsanyi, T. Chitnis
- P129** Time to regression from trial-defined disease progression in multiple sclerosis is dependent upon baseline Expanded Disability Status Scale
O. Gray (Melbourne, Australia), H. Butzkueven, D. Jolley, M. Hoffmann for the MSBase Investigators
- P130** Withdrawn
- P131** Vestibular evoked myogenic potential in multiple sclerosis patients
M. Harirchian (Tehran, Iran), N. Karimi, S. Nafissi
- P132** Modeling of staying times for multiple sclerosis patients
N. Harner, C. Lederer, L. Fahrmeir, G. Ebers, M. Daumer (Munich, Germany)
- P133** Classical twin studies in multiple sclerosis: time to move on?
C. Hawkes (Romford, United Kingdom), A. MacGregor
- P134** Steps towards validation of a severity-based multiple sclerosis classification system using the Ian McDonald MS Database
M. Güntner, J. Herbert (New York, New York, USA), A. Neuhaus, M. Daumer
- P135** Two polymorphisms of angiotensinogen gene and their association with multiple sclerosis
M. Hladikova (Brno, Czech Republic), P. Stourac, Y. Benešová, A. Vasku
- P136** Risk alleles for multiple sclerosis in a Dutch genetic isolate I. Hoppenbrouwers (Rotterdam, Netherlands), Y. Aulchenko, N. Jafari, G. Ebers, S. Ramagopalan, B. Oostra, C. van Duijn, R. Hintzen
- P137** ApoE ϵ 4 positive multiple sclerosis patients develop more gray matter and whole brain atrophy: a 4-year longitudinal study using the 15-year disease onset model
D. Horakova (Prague, Czech Republic), M. Kyr, E. Havrdova, O. Dolezal, Z. Seidl, M. Vaneckova, L. Pospisilova, M. Dwyer, M. Stosic, J. Cox, N. Bergsland, R. Zivadinov
- P138** Sleep-related disorders in multiple sclerosis
P. Immovilli (Parma, Italy), E. Dalla Bella, L. Parrino, G. Terzano, F. Granella
- P139** The correlation of multiple sclerosis prevalence and distance from a river
N. Jazebi (Isfahan, Iran), M. Saadatnia, M. Davoodi, M. Etemadifar, N. Zaghani, A. Maghzi, N. Nilforooshan
- P140** Sex ratios in multiple sclerosis records are robust epidemiological markers
P. Jensen (Frederiksberg, Denmark), J. Frederiksen
- P141** Environmental factors determine multiple sclerosis risk in migrants to Israel
E. Kahana (Ashkelon, Israel), M. Alter, N. Zilber for the Israeli MS Study Group
- P142** IL7RA polymorphisms and disease severity in multiple sclerosis
O. Kantarci (Rochester, Minnesota, USA), C. O'Doherty, E. Atkinson, K. Vandenbroeck, B. Weinschenker
- P143** Sequencing of IL2RA in multiple sclerosis patients
M. Matiello, B. Weinschenker, J. Schaefer-Klein, O. Kantarci (Rochester, Minnesota, USA)
- P144** Disease course rather than age at onset as the main disability factor in late-onset multiple sclerosis
P. Kerschen (Nancy, France), F. Guillemin, M. Debouverie for LORSEP
- P145** Four familial cases with anti-aquaporin-4 antibody
M. Park, H. Kim (Goyang, South Korea), B. Kim, J. An
- P146** Changes in diagnostic and referral delays in multiple sclerosis could impact incidence and prevalence studies: findings from Western and Eastern Canada
E. Kingwell (Vancouver, British Columbia, Canada), E. Roger, P. Duquette, P. Rieckmann, H. Tremlett
- P147** Prevalence of multiple sclerosis in Lithuania and the influence of immunomodulating treatment on annual hospitalization
R. Kizlaitiene (Vilnius, Lithuania), V. Budrys, G. Kaubrys, I. Runkauskaitė, D. Petrauskienė

P148 A prospective study of the time to conversion to clinically definite multiple sclerosis in 172 Greek patients with clinically isolated syndrome

G. Koutsis (Athens, Greece), M. Evangelopoulos, G. Karachalios, E. Andreadou, D. Mandellos, D. Vassilopoulos, C. Sfagos

P149 Viral triggers of multiple sclerosis attacks

J. Kriesel (Salt Lake City, Utah, USA), W. Sibley, M. McKeough, B. Jones, M. Poritz, P. Murphy, W. Hymas, D. Hillyard

P150 Gender ratio in the National Swedish MS Register

A. Landtblom (Linköping, Sweden), I. Boström, L. Stawiarz, G. Severinson, J. Hillert

P151 2008 update on the French EDMUS databases

R. Marignier (Lyon, France), S. Vukusic, I. Ionescu, M. Debouverie, C. Ritleng, C. Confavreux, G. Edan, M. Clanet, D. Brassat, P. Vermersch, B. Brochet, C. Lubetzki, T. Moreau, C. Lebrun-Frenay, J. De Sèze, P. Clavelou, J. Pelletier, G. Defer, L. Rumbach, W. Camu, O. Heinzlef, A. Creange, L. Magy, J. Camdessanché, S. Wiertlewski for the Observatoire Français de la Sclérose en Plaques

P152 Clinically confirmed varicella and the risk of childhood-onset multiple sclerosis in offspring

Y. Mikaeloff (Le Kremlin-Bicêtre, France), G. Caridade, S. Suissa, M. Tardieu for the KIDSEP study group of French Neuropediatric Society

P153 Multiple sclerosis and subsequent hospitalization with myocardial infarction and stroke: a population-based cohort study

S. Christensen, D. Kormendine Farkas, L. Pedersen, M. Miret (Geneva, Switzerland), H. Toft Sorensen

P154 Physician preferences for the specialty care of multiple sclerosis patients

F. Moore (Montréal, Québec, Canada), J. Uniat, B. Zhu, J. Dupuis, C. Wolfson

P155 Divorce and separation in multiple sclerosis

C. Pflieger (Aalborg, Denmark), N. Koch-Henriksen, H. Brønnum-Hansen

P156 Early retirement in multiple sclerosis

C. Pflieger (Aalborg, Denmark), N. Koch-Henriksen, E. Meulengracht Flachs

P157 A multicenter retrospective study of Thai multiple sclerosis patients

S. Siritho (Bangkok, Thailand), N. Prayoonwiwat

P158 Association of HLA DR2 haplotype DQB1*0602 and DRB1*1501 alleles in Brazilian primary progressive multiple sclerosis

C. Vasconcelos (Rio de Janeiro, Brazil), O. Fernández, L. Fernandez, R. Alvarenga

P159 Change of sex-ratio over time in multiple sclerosis: national and regional data from the French 'Observatoire de la Sclérose en Plaques'

S. Vukusic (Lyon, France), I. Ionescu, M. Debouverie, C. Ritleng, B. Frangoulis, C. Confavreux, G. Edan, M. Clanet, D. Brassat, P. Vermersch, B. Brochet, C. Lubetzki, T. Moreau, C. Lebrun-Frenay, J. De Sèze, P. Clavelou, J. Pelletier, G. Defer, L. Rumbach, W. Camu, O. Heinzlef, A. Creange, L. Magy, J. Camdessanché, S. Wiertlewski for the Observatoire Français de la Sclérose en Plaques

P160 HLA B7/A2, Epstein-Barr Virus antibodies and magnetic resonance imaging in multiple sclerosis: a case for gene-environment interactions

R. Zivadinov (Buffalo, New York, USA), B. Weinstock-Guttman, M. Zorzon, L. Uxa, M. Serafin, A. Bosco, A. Bratina, C. Maggiore, A. Grop, M. Tommasi, B. Srinivasaraghavan, M. Ramanathan

Experimental Disease Models

P161 A potential new therapy to alleviate experimental autoimmune encephalomyelitis symptoms: an animal model of multiple sclerosis

P. Bose (Gainesville, Florida, USA), J. Hou, C. Phadke, Y. Cheng, R. Smith, R. Parmer, P. Hoffman, W. Streit, F. Thompson

P162 Estrogen and progesterone prevent demyelination and affect oligodendrocyte function in the cuprizone model

A. Braun (Aachen, Germany), A. Norkute, S. Johann, S. Komoly, P. Acs, C. Beyer, M. Kipp

P163 Oligodendroglial expression of DCC is required for the organization of paranodal junctions *in vivo*

S. Bull (Montréal, Québec, Canada), M. Almasieh, A. Di Polo, T. Kennedy

P164 A cyclooxygenase 2 inhibitor limits demyelination in a murine model of multiple sclerosis and protects oligodendrocytes from excitotoxic death in culture

N. Carlson (Salt Lake City, Utah, USA), M. Rojas, J. Redd, B. Wood, K. Hill, J. Rose

P165 Longitudinal monitoring of an animal model of opticospinal demyelination by magnetic resonance imaging

N. Collongues (Strasbourg, France), F. Blanc, J. Steibel, B. Guignard, D. Lam, S. Ghandour, J. de Seze

P166 Didox - a pluripotent polyphenol for treating demyelinating disease

C. Campbell, R. Schwartz, D. Feinstein, B. Catania, J. Dupree, H. Sims, H. Elford, G. DeVries (Chicago, Illinois, USA)

P167 Targeted experimental autoimmune encephalomyelitis with persistent demyelination and delayed functional loss

S. Tsai, R. Schwartz, J. Dupree, R. Swanberg, C. Campbell, H. Sims, G. DeVries (Hines, Illinois, USA)

P168 Atacept inhibits disease in multiple forms of experimental autoimmune encephalomyelitis

K. Lewis, P. Sivakumar, S. Okada, K. Bontadelli, M. Maurer, H. Ren, K. Waggie, J. Gross, P. Zaratina, C. Ladel, S. Dillon (Seattle, Washington, USA)

P169 Adaptive angiogenesis in response to normobaric hypoxia is protective in experimental autoimmune encephalomyelitis

P. Dore-Duffy (Detroit, Michigan, USA), M. Wencel, V. Katyshev, X. Wang, K. Cleary, A. Mehedi

P170 Identification of the RNA targets bound by the QUAKING RNA binding proteins

E. Doukhanine (Montréal, Québec, Canada), S. Richard

POSTER SESSION 1

- P171** Experimental autoimmune encephalomyelitis induction in mice with cuprizone-induced demyelination leads to cerebral MS-like lesions
A. Escher (Goettingen, Germany), S. Nessler, P. Vollmar, D. Merkler, S. Boretius, W. Bruck, H. Reichardt, F. Luehder, C. Stadelmann
- P172** Transgene expression levels in bone marrow grafts determine its immunogenicity in sublethally myeloablated mice
C. Espejo (Barcelona, Spain), H. Eixarch, A. Gómez, E. Kádár, M. George, A. Martínez, R. Gimeno, X. Montalban, J. Barquinero
- P173** P2x7 deficiency attenuates experimental autoimmune encephalomyelitis
D. Feinstein (Chicago, Illinois, USA), P. Polak, A. Sharp, J. Richardson
- P174** Armed CNS CD8+ T cells promote demyelination through a perforin-independent mechanism
S. Fournier (Montréal, Québec, Canada), J. Estrada, M. N'Diaye, S. Hung, K. Wolak
- P175** The mechanism of experimental autoimmune encephalomyelitis tolerance induced by stress-related chaperone Hsp70 complexed with endogenous peptides depends on H60 and NKG2D interaction
G. Galazka (Lodz, Poland), A. Jurewicz, W. Orlowski, M. Stasiolek, C. Brosnan, C. Raine, K. Selmaj
- P176** Fingolimod reduces axonal loss in relapsing secondary progressive experimental autoimmune encephalomyelitis
S. Jackson, S. Al-Izlik, G. Pryce, G. Giovannoni (London, United Kingdom), D. Baker
- P177** The experimental autoimmune encephalomyelitis model in Lewis rats: can we ignore the concomitant arthritis?
N. Godessart (Sant Feliu Llobregat, Spain)
- P178** Mesenchymal stromal cells derived from bone marrow and Wharton's Jelly as potential sources for cell-based therapies in multiple sclerosis
E. Theunissen, M. Moreels, P. Ponsaerts, I. Lambrichts, P. Stinissen, N. Hellings (Diepenbeek, Belgium)
- P179** Poly(ADP)ribose polymerase inhibitor modifies the activities of various kinase cascades in the cuprizone-induced demyelination model
S. Veto, P. Acs, A. Tapodi, Z. Lendvai, S. Komoly, Z. Illes (Pecs, Hungary), F. Gallyas
- P180** Connexin expression in acute and chronic mouse models of experimental autoimmune encephalomyelitis
S. Karlik (London, Ontario, Canada), D. Carter, W. Roscoe
- P181** Experimental autoimmune encephalomyelitis in interleukin-15 knock out mice
S. Karlik (London, Ontario, Canada), A. Rousseau, W. Roscoe
- P182** Cuprizone treatment induces demyelination in the hippocampus formation
M. Kipp (Aachen, Germany), A. Norkute, A. Hieble, F. Pott, S. Gingele, C. Beyer
- P183** Remyelination is delayed in the gray matter compared with white matter tracts after cuprizone-induced demyelination
M. Kipp (Aachen, Germany), A. Norkute, A. Braun, C. Beyer
- P184** The TGF-beta inhibitor Smad7 controls t cell differentiation and susceptibility to autoimmune encephalomyelitis
I. Kleiter (Regensburg, Germany), J. Song, A. Croxford, D. Lukas, M. Fantini, X. Pedré, M. Hasan, A. Mildner, M. Prinz, C. Becker, A. Steinbrecher, A. Waisman
- P185** p57kip2 is dynamically regulated in experimental autoimmune encephalomyelitis and functions as a negative regulator of postmitotic oligodendroglial differentiation
D. Kremer, A. Heinen, J. Jadasz, K. Zimmermann, S. Jander, H. Hartung, P. Kuery (Duesseldorf, Germany)
- P186** β 1 integrin promotes survival of oligodendrocyte progenitor cells
K. Lee (Ottawa, Ontario, Canada), R. Kothary
- P187** The dominancy of encephalitogenic peptide correlates to its ability to induce potent regulatory T cells
Y. Lin (Kodaira, Japan), S. Miyake, T. Yamamura
- P188** IL-6 trans-signaling modulates the early effector phase of experimental autoimmune encephalomyelitis and targets the blood-brain barrier
R. Linker (Bochum, Germany), F. Lühder, K. Kallen, D. Lee, B. Engelhardt, S. Rose-John, R. Gold
- P189** Hydroxytyrosol improves clinical and neuropathological signs of both relapsing-remitting and chronic non-remitting experimental autoimmune encephalomyelitis
M. Mansilla (Barcelona, Spain), C. Costa, M. Castillo, A. Geerlings, J. Xaus, J. Boza, M. Comabella, X. Montalban, C. Espejo
- P190** Low-dose naltrexone [LDN] prevents development or delays onset and reduces severity of experimental autoimmune encephalomyelitis in mice
K. Rahn, P. McLaughlin (Hershey, Pennsylvania, USA), R. Bonneau, A. Turel, G. Thomas, I. Zagon
- P191** A role for integrin-linked kinase in oligodendrocyte mediated myelination of the central nervous system
J. Michalski (Ottawa, Ontario, Canada), K. Lee, R. O'Meara, R. Kothary
- P192** Depletion of commensal microflora of the gut alters global immune homeostasis and influences the development of experimental autoimmune encephalomyelitis in mice
J. Ochoa-Repáraz (Hanover, New Hampshire, USA), L. Ditrio, D. Mielcarz, L. Kasper
- P193** Oral teriflunomide in patients with relapsing MS: baseline clinical features of patients in the TEMSO phase III trial
P. O'Connor (Toronto, Ontario, Canada), C. Confavreux, G. Comi, L. Kappos, J. Wolinsky, T. Olsson, A. Miller, M. Freedman for the TEMSO Investigator Study Group
- P194** The linked role Of TLR-4 And HO-1 in the experimental autoimmune encephalomyelitis model
D. Oliveira (São Paulo, Brazil), M. Cenedeze, M. Juliano, L. Juliano, A. Gabbai, A. Pacheco-Silva, E. Oliveira, N. Câmara
- P195** Identification of novel integrin-linked kinase interacting proteins in CG4 oligodendrocytes during proliferation and differentiation
R. O'Meara (Ottawa, Ontario, Canada), K. Lee, J. Michalski, R. Kothary

- P196** Proportional changes of T-independent B cell subsets during acute-recovery phases of experimental autoimmune encephalomyelitis
C. Lee Chang, D. LeFranc, C. Faveeuw, P. Vermersch, L. Prin, B. Oxombre - Vanteghem (Lille, France)
- P197** High resolution 1H nuclear magnetic resonance spectroscopic-based metabolomic urine analysis of experimental autoimmune encephalitis, a model disease of multiple sclerosis
H. Parkes (London, United Kingdom), S. Shorter, P. So, D. Baker, G. Pryce, G. Giovannoni, K. Schmierer
- P198** Human endogenous retrovirus W envelope induces a preclinical multiple sclerosis model in C57/B16 myelin oligodendrocyte glycoprotein mouse: therapeutic effect of monoclonal antibody
H. Perron (Plan les Quates, Switzerland), K. Sanhadji, I. Popa, H. Dougier-Reynaud, J. Langlois, C. Bernard, A. Lang, M. Janier, P. Marche, J. Portoukalian
- P199** Human endogenous retrovirus W envelope promotes demyelination in C57/B16 MOG mouse model: effect of specific monoclonal antibody
H. Perron (Plan Les Quates, Switzerland), K. Sanhadji, I. Popa, C. Bernard, J. Langlois, H. Dougier-Reynaud, J. Touraine, M. Janier, P. Marche, J. Boucraut, A. Lang, J. Portoukalian
- P200** Progressive central atrophy precedes the onset of disability in a murine model of multiple sclerosis
I. Pirko (Cincinnati, Ohio, USA), Y. Chen, J. McDole, R. Dunn, D. Lindquist, A. Johnson
- P201** Magnetic resonance imaging quantification of lumbar spinal cord inflammation in mouse experimental autoimmune encephalomyelitis in vivo
J. Ribic (Oslo, Norway), K. Fang, T. Kilpatrick, G. Egan, H. Butzkueven
- P202** Exploring the neuro-vascular niche as potential target for treatment in MS
P. Rieckmann (Vancouver, British Columbia, Canada), B. Kallmann, V. Hummel, A. Mueller, S. Wiese for the Multiple Sclerosis Research Program at UBC Vancouver, Canada
- P203** Axon stress and disruption of the axo-glial complex prior to the onset of disease in experimental allergic encephalomyelitis
J. Rundle (London, United Kingdom), A. Garg, R. Reynolds, O. Howell
- P204** Effects of the anti VLA-4 small molecule inhibitor BI05192 on clinical course and pathology in chronic experimental allergic encephalomyelitis
J. Rundle (London, United Kingdom), D. Papadopoulos, R. Patel, J. Richardson, R. Reynolds
- P205** Monitoring of experimental autoimmune encephalomyelitis pathways during pharmacological modulation
G. Saborio (Geneva, Switzerland), S. Carboni, M. Lamarine, C. Salvat, S. Nock, H. Peixoto, M. Curchod, C. Vignaud, F. Zanoquera, J. Wojcik, H. Abderrahim, P. Vitte
- P206** APOE 4 polymorphism results in early cognitive deficits in the experimental autoimmune encephalomyelitis mouse
J. Shi (Scottsdale, Arizona, USA), J. Tu, T. Vollmer, C. Zhao, S. Kuniyoshi
- P207** Prophylactic and therapeutic suppression of experimental autoimmune encephalomyelitis by a novel bifunctional peptide inhibitor
T. Siahaan (Lawrence, Kansas, USA)
- P208** Rapid induction of VEGF by CD8 T cells precedes central nervous system vascular permeability
G. Suidan (Cincinnati, Ohio, USA), J. Dickerson, K. Seroogy, I. Pirko, A. Johnson
- P209** Neutrophil elastase inhibitor, sivelestat sodium hydrate reduces severity of experimental autoimmune encephalomyelitis
Y. Tomizawa (Bunkyo-ku, Japan), K. Yokoyama
- P210** Fish diet prevents impaired mobility in the murine cuprizone model for multiple sclerosis
O. Torkildsen (Bergen, Norway), L. Brunborg, A. Milde, K. Myhr, L. Bø
- P211** Cuprizone feeding in mice is a model for cortical demyelination
T. Skripuletz, C. Trebst (Hannover, Germany), V. Gudi, A. Kotsiari, N. Garde, D. Moharreggh-Khiabani, M. Stangel
- P212** Treatment with a component of red wine, resveratrol, in a virus-induced murine model for multiple sclerosis
I. Tsunoda (Salt Lake City, Utah, USA), N. Carlson, M. Rojas, F. Hasanovic, J. Rose
- P213** Identification of the interacting proteins with the QUAKING RNA binding protein
Y. Wang (Montréal, Québec, Canada), S. Richard for the Terry Fox Molecular Oncology Group and Bloomfield Center for Research on Aging
- P214** Antigen presentation by dendritic cells is sufficient for full induction of active experimental autoimmune encephalomyelitis with peptide but not protein
G. Wu (Philadelphia, Pennsylvania, USA), T. Laufer
- P215** Repair of myelin by glatiramer acetate following toxin-mediated demyelination in mice
V. Skihar, C. Silva, V. Yong (Calgary, Alberta, Canada)
- P216** The complete blockade of opioid receptors with naltrexone exacerbates experimental autoimmune encephalomyelitis in a mouse model
I. Zagon (Hershey, Pennsylvania, USA), K. Rahn, R. Bonneau, A. Turel, G. Thomas, P. McLaughlin
- P217** Hippocampal neurodegeneration in experimental autoimmune encephalomyelitis
M. Ziehn (Los Angeles, California, USA), S. Tiwari-Woodruff, R. Voskuhl

POSTER SESSION 1

Imaging—Part 1

- P218** Magnetic resonance spectroscopy in neuromyelitis optica
F. Aboul-Enein (Vienna, Austria), M. Krssak, J. Jecel, D. Prayer, W. Kristoferitsch
- P219** Tactile-associated recruitment of cervical cord is more altered in multiple sclerosis patients with more severe disability
M. Absinta (Milan, Italy), P. Valsasina, F. Agosta, D. Caputo, M. Filippi
- P220** Diffusion tensor imaging in the evaluation of fine structure of giant white matter lesions
A. Achiron (Tel-Aviv, Israel), S. Miron, S. Tal, M. Stern, A. Achiron
- P221** Acute hemorrhagic leukoencephalitis with benign evolution: computed tomography and magnetic resonance imaging features
T. Adoni (São Paulo, Brazil), L. Portela, E. Mutarelli, E. Evaristo, P. da Gama, D. Callegaro for BCTRIMS
- P222** Functional magnetic resonance imaging correlates of neuropsychological impairment in primary progressive multiple sclerosis
F. Agosta (Milan, Italy), M. Rocca, A. Ceccarelli, M. Falautano, M. Rodegher, G. Comi, M. Filippi
- P223** Conventional magnetic resonance and diffusion tensor imaging in recurrent neuromyelitis optica: analysis of 30 patients
M. Alvarenga (Rio de Janeiro, Brazil), G. Santos, L. Brandão, R. Papais-Alvarenga
- P224** Reduced cerebellar grey matter volume is associated with cerebellar dysfunction in multiple sclerosis
V. Anderson (London, United Kingdom), L. Fisniku, D. Altmann, D. Chard, A. Thompson, D. Miller
- P225** Texture analysis of brain magnetic resonance imaging differs in pediatric clinically isolated syndrome patients at low risk and high risk for developing multiple sclerosis
S. Antel (Montréal, Québec, Canada), A. Bar-Or, D. Sadovnick, B. Banwell, D. Arnold for the Canadian Pediatric Demyelinating Disease Study Group
- P226** Gray matter atrophy is present in patients with clinical isolated syndrome suggestive of multiple sclerosis
B. Audoin (Marseille, France), I. Malikova, A. Rico, F. Reuter, P. Cozzone, J. Pelletier, J. Ranjeva
- P227** Deep gray matter atrophy is associated with T2 hypointensity in secondary progressive multiple sclerosis
D. Goldberg-Zimring, M. Neema, J. Sharma, Z. Jaisani, B. Singh, R. Bakshi (Boston, Massachusetts, USA)
- P228** Association of regional gray matter volume loss and progressive white matter lesions in multiple sclerosis
K. Bendfeldt (Basel, Switzerland), P. Kuster, S. Traud, H. Egger, S. Winkhofer, N. Mueller-Lenke, Y. Naegelin, A. Gass, L. Kappos, P. Matthews, T. Nichols, E. Radue, S. Borgwardt
- P229** Basal ganglic and thalamic volume change in relapsing-remitting multiple sclerosis
N. Denier, K. Bendfeldt (Basel, Switzerland), S. Borgwardt, P. Kuster, S. Traud, N. Mueller-Lenke, Y. Naegelin, A. Gass, L. Kappos, E. Radue
- P230** A diffusion tensor, magnetic resonance imaging study of cervical cord damage in benign and secondary progressive multiple sclerosis patients
B. Benedetti (Milan, Italy), M. Rovaris, M. Rocca, A. Pulizzi, D. Caputo, M. Zaffaroni, R. Capra, A. Bertolotto, V. Martinelli, G. Comi, M. Filippi
- P231** Neuro-axonal brain viability does not differ between benign and early relapsing-remitting multiple sclerosis patients
B. Benedetti (Milan, Italy), M. Rovaris, M. Rocca, A. Pulizzi, D. Caputo, M. Zaffaroni, R. Capra, A. Bertolotto, V. Martinelli, A. Falini, G. Comi, M. Filippi
- P232** Diffusion tensor imaging of white matter in children with multiple sclerosis
A. Bethune (Toronto, Ontario, Canada), D. Mabbott, C. Rockel, J. Sled, R. Ghassemi, S. Narayanan, D. Arnold, B. Banwell for the Canadian Pediatric Demyelinating Disease Study Group
- P233** Early corpus callosum damage predicts progression of disability over 3 years in primary progressive multiple sclerosis
B. Bodini (London, United Kingdom), Z. Khaleeli, M. Cercignani, D. Miller, A. Thompson, O. Ciccarelli
- P234** Association between regional gray matter volume loss and Expanded Disability Status Scale score in relapsing-remitting multiple sclerosis: a longitudinal voxel-based morphometry study
P. Loetscher, S. Borgwardt (Basel, Switzerland), K. Bendfeldt, P. Kuster, S. Traud, Y. Naegelin, A. Gass, L. Kappos, E. Radue
- P235** Is voxel-based morphometry an appropriate method to study associations between regional gray matter volume changes and white matter lesions in the time course of multiple sclerosis?
S. Borgwardt (Basel, Switzerland), P. Kuster, S. Traud, Y. Naegelin, A. Gass, L. Kappos, E. Radue, K. Bendfeldt
- P236** Correlation of disease severity and regional brain tissue loss in relapsing-remitting multiple sclerosis: a voxel-based morphometry study in a large population
V. Brescia Morra (Naples, Italy), A. Prinster, R. Lanzillo, M. Quarantelli, G. Vacca, C. Mollica, V. Schiavone, A. Brunetti, E. Salvatore, B. Alfano, G. Orefice
- P237** Clinical and magnetic resonance imaging dissociation in patients with multiple sclerosis is not explained by loss of brain volume or the presence of spinal cord lesions
G. Buckle (Boston, Massachusetts, USA), B. Healy, E. Ali, B. Glanz, R. Bakshi, C. Guttmann, H. Weiner
- P238** Effects of actual and simulated Z-shifts on T2-lesion volumes in patients with multiple sclerosis
Z. Caramanos (Montréal, Québec, Canada), V. Fonov, S. Francis, D. Collins, S. Narayanan, D. Arnold
- P239** Z-shift effects on segmented brain-tissue volumes
Z. Caramanos (Montréal, Québec, Canada), V. Fonov, M. Derakhshan, D. Collins, S. Narayanan, D. Arnold
- P240** High-field structural magnetic resonance imaging correlates of motor network dysfunction in primary progressive multiple sclerosis
A. Ceccarelli (Milan, Italy), M. Rocca, M. Rodegher, G. Comi, M. Filippi

- P241** Structural and functional magnetic resonance imaging abnormalities of the language network in primary progressive multiple sclerosis: a combined functional magnetic resonance imaging and tractography study
A. Ceccarelli (Milan, Italy), M. Rocca, G. Riccitelli, M. Rodegher, G. Comi, M. Filippi
- P242** Differential degree of blood-brain barrier permeability during experimental autoimmune encephalomyelitis measured by gadolinium-enhancement magnetic resonance imaging
L. Chaabane (Colleretto Giacosa, Italy), T. Adage, S. Aime, B. Greco, P. Zaratini
- P243** An investigation of repair mechanisms after spinal cord relapse in multiple sclerosis using magnetic resonance imaging
O. Ciccarelli (London, United Kingdom), D. Altmann, M. McLean, C. Wheeler-Kingshott, K. Wimpey, D. Miller, A. Thompson
- P244** Increase of cost-benefit ratio of magnetic resonance imaging: an adaptive design for identifying high inflammatory multiple sclerosis patients
M. Daumer (München, Germany), A. Neuhaus, M. Güntner, R. Martin
- P245** A genome scan for loci affecting the rate of brain atrophy in multiple sclerosis
P. De Jager (Boston, Massachusetts, USA), C. Guttmann, B. Healy, R. Zivadinov, D. Horakova, H. Weiner, D. Hafler
- P246** Retinal thickness and optic radiation in neuromyelitis optica: an optic coherence tomography and diffusion tensor magnetic resonance-tractography study
J. Jeantroux, S. Kremer, F. Blanc, N. Collongues, M. Fleury, J. Dietemann, J. de Seze (Strasbourg, France)
- P247** Magnetic resonance spectroscopy evaluation in patients with neuromyelitis optica
J. de Seze (Strasbourg, France), F. Blanc, S. Kremer, N. Collongues, M. Fleury, I. Namer
- P248** Feature-space analysis of multi-contrast magnetic resonance imaging intensities in multiple sclerosis lesions
E. Dell'Oglio (Boston, Massachusetts, USA), D. Meier, M. Sampat, C. Guttmann
- P249** Early brain atrophy and lesion load measures relate to clinical status after six years in patients with clinically isolated syndromes
M. Di Filippo (London, United Kingdom), V. Anderson, D. Altmann, J. Swanton, G. Plant, A. Thompson, D. Miller
- P250** 3T predicts better clinical and demographic outcomes in patients with multiple sclerosis than 1.5T. A preliminary case-control study
C. Di Perri (Buffalo, New York, USA), M. Dwyer, J. Cox, K. Hashmi, D. Wack, S. Hussein, M. Stosic, C. Schirda, D. Honajcki, E. Saluste, C. Mihai, B. Weinstock-Guttman, F. Munschauer, R. Bergamaschi, S. Bastianello, R. Zivadinov
- P251** Lesion characteristics at 1.5 and 3 Tesla in multiple sclerosis patients and healthy controls: a morphological and topological quantitative comparison study
C. Di Perri (Buffalo, New York, USA), M. Dwyer, D. Wack, J. Cox, K. Hashmi, E. Saluste, S. Hussein, M. Stosic, C. Schirda, S. Bastianello, R. Zivadinov
- P252** Development of new magnetic resonance imaging lesions in clinically isolated syndrome patients: a single-center study
V. Durastanti (Rome, Italy), E. Tinelli, G. Barletta, L. Prosperini, S. Santucci, I. Pestalozza, C. Pozzilli
- P253** Evidence for cortical reorganisation in cognitive domains in multiple sclerosis: insights from a 'Go/NoGo' Task
C. Enzinger (Graz, Austria), M. Loitfelder, S. Ropele, C. Neuper, K. Petrovic, E. Aspeck, S. Fuchs, F. Fazekas
- P254** Magnetic resonance imaging results of a 3-year randomized trial comparing two therapeutic strategies in aggressive relapsing-remitting multiple sclerosis: mitoxantrone as induction for 6 months followed by interferon-b-1b versus interferon-b-1b
M. Filippi (Milan, Italy), E. Le Page, E. Leray, G. Edan, G. Comi
- P255** Fluctuations in brain parenchymal fraction: a longitudinal study
E. Fisher (Cleveland, Ohio, USA), J. Lee, R. Rudick
- P256** Pathologic correlates of magnetic resonance imaging-detected diffuse tissue damage in multiple sclerosis brains
E. Fisher (Cleveland, Ohio, USA), N. Mall, S. Thomas, A. Rietsch, K. Nakamura, R. Fox, R. Ransohoff
- P257** Changes in brain lesion load over 20 years and subsequent brain atrophy in clinically isolated syndrome patients
L. Fisniku (London, United Kingdom), P. Brex, D. Chard, J. Jackson, D. Altmann, K. Miszkiel, A. Thompson, D. Miller
- P258** White matter lesion characteristics predict types of gray matter abnormality on magnetic resonance imaging in secondary progressive multiple sclerosis
J. Furby (London, United Kingdom), T. Hayton, K. Smith, D. Altmann, R. Brenner, J. Chataway, R. Hughes, D. Miller, R. Kapoor
- P259** Altered functional adaptation of working memory performance in early relapsing-remitting multiple sclerosis
A. Gass (Basel, Switzerland), L. Doessegger, M. Amann, J. Hirsch, K. Weier, L. Kappos, E. Radue, I. Penner
- P260** Automated quality control of brain magnetic resonance images
E. Gedamu (Montréal, Québec, Canada), L. Collins, D. Arnold
- P261** Patterns of regional brain atrophy and growth in children with clinically isolated syndromes at high and low risk of conversion to multiple sclerosis
P. Giacomini (Montréal, Québec, Canada), M. Derakhshan, S. Narayanan, J. Sled, D. Sadovnick, A. Bar-Or, B. Banwell, D. Arnold for the Canadian Pediatric Demyelinating Disease Study Group
- P262** Pediatric patients with clinically isolated syndromes at high risk of conversion to multiple sclerosis exhibit brain atrophy while those at low risk of conversion exhibit brain growth
P. Giacomini (Montréal, Québec, Canada), S. Francis, S. Narayanan, J. Sled, D. Sadovnick, A. Bar-Or, B. Banwell, D. Arnold for the Canadian Pediatric Demyelinating Disease Study Group
- P263** Normal findings on brain fluid attenuated inversion recovery magnetic resonance imaging scans at 3T
Z. Guss (Boston, Massachusetts, USA), J. Stankiewicz, M. Neema, R. Bakshi

POSTER SESSION 1

- P264** Visualization and quantification of iron in multiple sclerosis lesions using susceptibility-weighted imaging
E. Haacke (Detroit, Michigan, USA), O. Khan, M. Makki, S. Hreha, M. Selvan, Z. Latif, Y. Ge
- P265** Improved radio frequency coils for 3T magnetic resonance imaging of the optic nerve
J. Hadley (Salt Lake City, Utah, USA), R. Merrill, E. Minalga, D. Parker, J. Rose
- P266** Comparison of sample size requirements for treatment effects using gray matter, white matter and whole brain volume in patients with multiple sclerosis
B. Healy (Boston, Massachusetts, USA), P. Valsasina, M. Filippi, R. Bakshi
- P267** Evaluation of an automatic change detection method in serial scalar images characterizing diffusion properties of multiple sclerosis patients
B. Hervé (Illkirch, France), V. Noblet, S. Nollet, F. Heitz, F. Cattin, L. Rumbach, J. Armspach
- P268** Optical coherence tomography in patients under 21 years with inflammatory demyelinating conditions
G. Hiremath (Baltimore, Maryland, USA), E. Gordon-Lipkin, J. Ratchford, P. Calabresi
- P269** Blood flow parameters in the ophthalmic artery in acute and chronic phase of optic neuritis - ultrasound evaluation
P. Hradilek (Ostrava, Czech Republic), O. Zapletalova, I. Woznicova, D. Skoloudik
- P270** The motor corpus callosum as a marker of structural, functional and behavioral changes in early relapsing-remitting multiple sclerosis patients
A. Hübers (Frankfurt/Main, Germany), M. Wahl, B. Lauterbach-Soon, B. Bliem, U. Ziemann for the Motor Cortex Laboratory
- P271** Ibudilast reduces conversion of new inflammatory lesions to persistent black holes in active relapsing multiple sclerosis
H. Hulst (Amsterdam, Netherlands), R. Gammans, B. Moraal, F. Barkhof for the MN-166-CL-001 Investigators
- P272** Brain iron quantification in primary-progressive multiple sclerosis: a magnetic field correlation study
M. Inglese (New York, New York, USA), R. Stackhouse, J. Jensen, K. Szulc, J. Babb, J. Herbert, R. Grossman
- P273** Brain tissue sodium concentration in multiple sclerosis: a preliminary study
M. Inglese (New York, New York, USA), N. Desingmann, G. Johnson, J. Herbert
- P274** Optic nerve axonal loss using optical coherence tomography in 93 patients with multiple sclerosis and comparison with healthy subjects
L. Jeanjean (Nimes, France), G. Castelnovo, M. Bouyon, P. Bousquet, F. Mura, M. Villain, G. Dupeyron, J. De Seze, P. Labauge
- P275** Magnetic resonance imaging long-term follow-up of patients with neuromyelitis optica
W. Krampfl, F. Aboul-Enein, J. Jecel (Vienna, Austria), W. Kristoferitsch
- P276** Using structural and functional magnetic resonance imaging to explain visual loss at the onset of acute optic neuritis
T. Jenkins (London, United Kingdom), L. Mancini, O. Ciccarelli, A. Toosy, D. Altmann, K. Chappell, G. Plant, D. Miller, A. Thompson
- P277** The utilization of corpus callosum atrophy as a marker for disease progression in multiple sclerosis
N. Kale (Rochester, Minnesota, USA), J. Agaoglu, G. Onder, O. Tanik
- P278** Distribution of multiple sclerosis plaques in the spinal cord
G. Goldin, D. Kantor (Jacksonville, Florida, USA)
- P279** Can magnetization transfer data from different magnetic resonance imaging scanner/sequence/pulse types be standardized? an application of correction factor function method
A. Kelemen (Buffalo, New York, USA), M. Dwyer, S. Hussein, M. Stosic, Y. Liang, R. Zivadinov
- P280** Measurement of gray matter volume is less susceptible to pseudoatrophy effect than that of white matter or whole brain volume in patients with multiple sclerosis. Results from Avonex-Steroids-Azathioprine combination study
A. Kelemen (Buffalo, New York, USA), M. Dwyer, D. Horakova, M. Vaneckova, E. Havrdova, R. Zivadinov
- P281** Gadolinium enhancing lesions decrease over time in early primary progressive multiple sclerosis
Z. Khaleeli (London, United Kingdom), O. Ciccarelli, K. Miszkiel, A. Thompson, D. Altmann, D. Miller
- P282** Spinal cord atrophy in early and established primary progressive multiple sclerosis: a two-year follow-up
Z. Khaleeli (London, United Kingdom), O. Ciccarelli, F. Manfredonia, D. Altmann, D. Miller, A. Thompson
- P283** Magnetization transfer ratio in multiple sclerosis: axonal loss or demyelination?
A. Klistorner (Sydney, Australia), J. Rao, T. Forster-Anderson, H. Arvind, R. Garrick
- P284** Optic Neuritis as a sentinel lesion to study neuroprotection and repair in a trial of autologous mesenchymal stem cells in multiple sclerosis
M. Kolappan (London, United Kingdom), P. Connick, A. Compston, A. Thompson, S. Chandran, D. Miller
- P285** Diffusion tensor imaging detects clinical and structural alterations in optic neuritis
R. Naismith (Saint Louis, Missouri, USA), J. Xu, N. Tutlam, A. Cross, S. Song
- P286** Short term validity of Barkhof and Swanton magnetic resonance imaging criteria for multiple sclerosis in patients with clinically isolated syndromes
F. Perez Miralles (Valencia, Spain), I. Bosca, M. Magraner, A. Pascual, M. Bosca, F. Coret, B. Casanova
- P287** Functional sensorimotor connectivity is preserved in patients with pediatric multiple sclerosis
M. Rocca (Milan, Italy), M. Absinta, A. Ghezzi, L. Moiola, G. Comi, M. Filippi

P288 The corpus callosum is a primary site of anisotropy changes in patients with optic neuritis
S. Schippling (Hamburg, Germany), M. Bester, C. Heesen, B. Holst, J. Fiehler, R. Martin

P289 Infratentorial lesions are a marker for poor prognosis in multiple sclerosis
M. Tintoré (Barcelona, Spain), A. Rovira, A. León, J. Río, D. Gutiérrez, C. Nos, H. Perkal, J. Castelló, A. Horga, M. Comabella, J. Sastre-Garriga, X. Montalban

P290 Pediatric patients have a higher disease burden at time of multiple sclerosis onset compared with adults
É. Waubant (San Francisco, California, USA), D. Chabas, D. Okuda, O. Glenn, É. Mowry, D. Pelletier

Neuroimmunology—Part 1

P291 Parameters of the immune system activation in patients with clinical diagnosis of neuromyelitis optica
M. Pimentel, G. Sant'Ana, F. Malfetano, V. Pereira, T. Santos, S. Alves-Leon (Rio de Janeiro, Brazil)

P292 Serological tests for neuromyelitis optica: specificity of immunoprecipitation assay for AQP4 autoantibody enhanced by eliminating GFP-Reactive IgG
M. Apiwattanakul (Rochester, Minnesota, USA), A. McKeon, J. Fryer, S. Hinson, S. Pittock, V. Lennon

P293 Antiaquaporin-4 antibodies and infectious myelitis
D. Brum, É. Donadi, A. Santos, O. Takayanagui, W. Marques, A. Barreira (Ribeirão Preto, Brazil)

P294 Glatiramer acetate reduces B cell survival factors in the central nervous system of experimental autoimmune encephalomyelitis induced mice
S. Begum-Haque (Lebanon, New Hampshire, USA), A. Sharma, D. Mielcarz, A. Haque, L. Kasper

P295 Glatiramer acetate regulates retinoic acid enzymes and Th17 cells in the central nervous system of experimental autoimmune encephalomyelitis induced mice
S. Begum-Haque (Lebanon, New Hampshire, USA), A. Sharma, I. Fayed, J. Ochoa-Repáraz, K. Pino-Lagos, D. Mielcarz, A. Haque, L. Kasper

P296 The lymphocyte subpopulation in patients with primary progressive multiple sclerosis and secondary progressive multiple sclerosis
É. Belniak (Lublin, Poland), A. Bojarska-Junak, H. Bartosik-Psujek, K. Mitosek-Szewczyk, M. Kulka, Z. Stelmasiak, J. Rolinski

P297 Clonally-expanded plasma cells in neuromyelitis optica cerebrospinal fluid produce IgG against aquaporin-4
J. Bennett (Denver, Colorado, USA), C. Lam, K. Bautista, C. Dupree, M. Glogowska, D. Case, P. Saikali, J. Antel, S. Reddy, B. Hemmer, G. Owens, D. Gilden

P298 Envelope protein from human endogenous retrovirus W serum antigenemia in multiple sclerosis patients and controls: a multicenter and blind-tested study on large series of multiple sclerosis patients and controls
C. Bernard (Plan-les-Ouates, Switzerland), A. Lang, É. Lucarz, H. Perron, I. Stefas

P299 AQP4 polymorphism in neuromyelitis optica
F. Blanc (Strasbourg, France), I. Dorboz, H. Zephir, R. Marignier, G. Castenovo, M. Fleury, É. Eymard-Pierre, S. Vukusic, P. Vermersch, C. Confavreux, P. Labauge, O. Boespflug, J. de Seze

P300 IgM oligoclonal bands predict an earlier second relapse in patients with clinically isolated syndromes
I. Bosca (Valencia, Spain), A. Pascual, F. Coret, J. Alvarez-Cermeño, M. Simó, M. Magraner, V. Belloch, L. Villar, B. Casanova

P301 Screening for aquaporin-4 antibodies in French-Canadian patients with unusual myelitis, optic neuritis, or both
J. Bouchard (Québec City, Québec, Canada), M. Thibault, P. Duquette, F. Grand'Maison, F. Jacques, P. Grammond

P302 Absence of evidence for varicella zoster virus as a disease-relevant antigen in multiple sclerosis
M. Burgoon (Denver, Colorado, USA), R. Cohrs, J. Bennett, S. Anderson, A. Ritchie, S. Cepok, D. Gilden, G. Owens

P303 Probable pathophysiological association between chronic Chlamydia pneumoniae infection and multiple sclerosis (allergic encephalomyelitis)
S. Celebi (Istanbul, Turkey)

P304 Functional role of brain-derived neurotrophic factor in axon protection during autoimmune demyelination
S. Cetin (Göttingen, Germany), R. Linker, D. Lee, N. Kruse, H. Neumann, M. Sendtner, S. Wiese, F. Lühder, R. Gold

P305 Immunomodulatory aspects of 1,25 Dihydroxyvitamin D3 in multiple sclerosis
J. Correale (Buenos Aires, Argentina), M. Gaitán, M. Ysraelit

P306 The role of CD8+ CD25+FoxP3+ regulatory cells in multiple sclerosis
J. Correale (Buenos Aires, Argentina), A. Villa

P307 Promoting differentiation of human fetal oligodendrocyte progenitors
Q. Cui (Montréal, Québec, Canada), G. Almazan, J. Antel

P308 Relevance of the study of oligoclonal bands as a prognostic factor of the conversion of clinically isolated syndrome into clinically definite multiple sclerosis in daily practice
É. Dionet (Clermont Ferrand, France), F. Taithe, M. Lauxerois, A. Fogli, P. Clavelou

P309 Astrocyte-secreted Sonic Hedgehog bears central nervous system anti-inflammatory activity and promotes optimal human blood-brain barrier functioning
A. Dodelet-Devillers (Montréal, Québec, Canada), I. Ifergan, M. Bernard, H. Kebir, R. Cayrol, K. Wosik, F. Charron, A. Prat

P310 Cerebrospinal fluid screening for evidence of Epstein Barr virus presence in multiple sclerosis
N. Donelan (New York, New York, USA), J. Dinzey, J. Lin, É. Brydon, S. Sadiq

P311 Peroxisome proliferator-activated receptor acts as an endogenous brake on the formation of Th1 and Th17 myelin-reactive cells
S. Dunn (Stanford, California, USA), D. Straus, R. Sobel, A. Johnson, R. Bhat, J. Dugas, A. Chawla, L. Steinman

POSTER SESSION 1

- P312** Ready for a new saga? Th17 and not Th1 are selectively increased in active multiple sclerosis and undergo apoptosis with interferon β
L. Durelli (Orbassano (TO), Italy), M. Clerico, L. Conti, G. Contessa, D. Boselli, C. Rivoiro, F. Novelli
- P313** Muscle fatigue resistance during experimental autoimmune encephalomyelitis in rats
B. Eijnde (Hasselt, Belgium), T. Broekmans, G. Alders, J. Hendriks, P. Stinissen
- P314** De Seze criteria: application to a series of 14 patients who presented a first acute severe demyelinating event
B. Eric (Nice, France), C. Lebrun-Frenay
- P315** Genetic predisposition of interaction of HLA-DRB with heat shock protein 70-1 gene polymorphism in Iranian multiple sclerosis patients
M. Shahbazi, D. Fathi (Gorgan, Iran), A. Rashidbaghan, D. Roshandel for MCMRC
- P316** A novel assay to measure effector B cell responses in pediatric clinically isolated syndrome/multiple sclerosis
L. Fawaz (Montréal, Québec, Canada), A. Rieger, A. Dicu, D. Gagne, D. Arnold, D. Sadovnick, U. Allen, R. Tellier, B. Banwell, A. Bar-Or for the Canadian Pediatric Demyelinating Network
- P317** Atorvastatin interference with interferon-beta signaling in human immune cells and in multiple sclerosis
X. Feng (Chicago, Illinois, USA), D. Han, A. Reder
- P318** Serum cytokine profile and disease activity in multiple sclerosis and neuromyelitis optica
X. Feng (Chicago, Illinois, USA), A. Javed, A. Reder2
- P319** Strain- and sex-specific relocation of CXCL12 at the blood-brain barrier may contribute to a relapsing-remitting phenotype during experimental autoimmune encephalomyelitis
A. Finger (St Louis, Missouri, USA), A. Cross, E. McCandless, E. Lyng, R. Klein
- P320** The use of CD39 as a marker for functional regulatory T cells in multiple sclerosis
J. Fletcher (Dublin, Ireland), R. Lonergan, L. Costelloe, C. O'Farrelly, N. Tubridy, K. Mills
- P321** Determination of patterns of oligoclonal bands specific to multiple sclerosis stage by digital image processing
M. García-Sánchez (Seville, Spain), E. Gómez-González, G. Izquierdo Ayuso, C. Cámara-Mora
- P322** Auto-reactive antibodies in primary progressive multiple sclerosis patients
N. Garg (Worcester, Massachusetts, USA), K. Kane, P. Riskind
- P323** Regulatory T cells and Th17 cells in healthy individuals and in patients affected by multiple sclerosis
C. Gasperini (Rome, Italy), D. Di Mitri, A. Diamantini, S. Galgani, D. Centonze, G. Bernardi, L. Battistini, G. Borsellino
- P324** Seven cases of relapsing myelitis with no identified cause
R. Gerales (Lisbon, Portugal), L. Gouveia, A. Luisa, M. Leite, P. Waters, A. Vincent, J. de Sá
- P325** Estriol treatment reduces matrix metalloproteinase-9 activity in multiple sclerosis and experimental autoimmune encephalomyelitis
S. Gold (Los Angeles, California, USA), S. Manda, L. Morales, N. Sicotte, R. Voskuhl
- P326** Dendritic cells express increased osteopontin in both experimental autoimmune encephalomyelitis and multiple sclerosis and amplify IL-17 production by CD4+T cells
M. Gopal (Boston, Massachusetts, USA), A. Mittal, H. Weiner
- P327** Withdrawn
- P328** HLA and KIR genotyping in Italian patients with relapsing-remitting multiple sclerosis
C. Fusco, E. Cosentini, G. Nocera, M. Rovaris, M. Valentino, P. Bruno, M. Clerici, M. Lombardi, F. Guerini (Milan, Italy)
- P329** ATP production in CD4+ positive cells as a measure of immune function in multiple sclerosis patients - possible impact of interferon beta on bioenergetics of immune effector cells
A. Haghikia (Bochum, Germany), M. Perrech, S. Höxtermann, D. Paes, S. Goelz, R. Gold, A. Chan
- P330** Role of the p38 mitogen-activated protein kinase (MAPK)/MAPK-activated protein kinase 2 (MAPKAP-K2) signaling cascade in oligodendrocyte differentiation
J. Haines (Montréal, Québec, Canada), G. Fragoso, J. Fang, W. Mushynski, G. Almazan
- P331** Cathepsins and their endogenous inhibitors cystatins in multiple sclerosis
D. Haves Zburuf (Haifa, Israel), T. Paperna, A. Gour-Lavie, I. Mandel, S. Dishon, L. Glass-Marmor, A. Miller
- P332** Phenotype of cerebrospinal fluid T cells induced by glatiramer acetate
T. Holmøy (Oslo, Norway), F. Vartdal, G. Skorstad, D. Price, A. Hestvik
- P333** Oligoclonal bands in multiple sclerosis: differences in repeated cerebrospinal fluid examinations
E. Idiman (Izmir, Turkey), S. Ozakbas, G. Kosehasanogullari, B. Piri
- P334** Inflamed blood-brain barrier promotes recruitment of effector memory CD8⁺ T lymphocytes and partakes in the pathogenicity of multiple sclerosis
I. Ifergan (Montréal, Québec, Canada), H. Kebir, A. Dodelet-Devillers, N. Arbour, A. Prat
- P335** Decreased T-bet expression in circulating T cells from women affected by multiple sclerosis during pregnancy
R. Iorio (Rome, Italy), G. Frisullo, V. Nociti, A. Patanella, A. Bianco, A. Marti, M. Mirabella, P. Tonalì, A. Batocchi
- P336** Intrathecal anti-Epstein Barr virus responses in distinct multiple sclerosis subgroups
N. Jafari (Rotterdam, Netherlands), J. Middeldorp, R. Hintzen
- P337** Antibody to aquaporin-4: serum levels correlate with clinical disease activity
S. Jarius (Oxford, United Kingdom), F. Aboul-Enein, P. Waters, B. Kuenz, A. Hauser, T. Berger, W. Lang, M. Reindl, A. Vincent, W. Kristoferitsch

- P338** Evaluation of biomarkers for the response to interferon- β treatment in multiple sclerosis
P. Jensen (Copenhagen, Denmark), F. Sellebjerg, M. Krakauer, L. Ryder, I. Alsing, D. Hesse, N. Koch-Henriksen, A. Svejgaard, P. Sorensen
- P339** VEGF-A induces blood-brain barrier permeability via downregulation of endothelial CLN-5
A. Argaw, B. Gurfein, Y. Zhang, A. Zameer, G. John (New York, New York, USA)
- P340** Interferon- β treatment of multiple sclerosis patients induces SHP-1 expression and modulates pro-inflammatory gene expression in peripheral blood mononuclear cells in vivo
B. Jubelt (Syracuse, New York, USA), G. Christophi, C. Mihai, L. Mejico, P. Massa
- P341** Suppression of experimental autoimmune encephalomyelitis by selective inhibition of Notch3 receptor in myelin-reactive T cells
M. Jurynczyk (Lodz, Poland), A. Jurewicz, C. Raine, K. Selmaj
- P342** Glatiramer acetate treated B cells suppress experimental autoimmune encephalomyelitis
M. Kala (Phoenix, Arizona, USA), S. Rhodes, W. Piao, D. Campagnolo, F. Shi, T. Vollmer
- P343** Defective regulation of BDNF, NGF and NT3 mRNA production after CD40 stimulation in immune cells of patients with relapsing-remitting multiple sclerosis
N. Urshansky, K. Mausner, A. Karni (Tel Aviv, Israel)
- P344** Immediate broad spectrum immunomodulating effects induced by bone marrow derived stem cells (MSC), in MS patients transplanted with MSC in a phase I/II clinical trial
A. Vaknin-Dembinsky, I. Kassis, C. Karageorgiou, B. Gowda-Kurkalli, J. Rachmilewitz, Y. Libster, T. Ben-Hur, S. Slavin, D. Karussis (Jerusalem, Israel)
- P345** Identification of double negative T cells expressing IL-17 in multiple sclerosis
I. Kawachi (Niigata, Japan), M. Arakawa, K. Yanagawa, M. Nishizawa
- P346** Human T_H17 memory lymphocytes promote blood-brain barrier disruption and infiltration of inflammatory T cells into the central nervous system
H. Kebir (Montréal, Québec, Canada), K. Kreymborg, I. Ifergan, A. Dodelet-Devillers, R. Cayrol, N. Arbour, B. Becher, A. Prat
- P347** B-cell driven humoral immune response in clinically aggressive African-American multiple sclerosis: a rational disease model for B-cell depleting therapy
O. Khan (Detroit, Michigan, USA), J. Perumal, S. Hreha, C. Caon, F. Bao, R. Penmesta, Z. Latif, I. Zak, M. Makki, A. Tselis, S. Millis, B. Cree, J. Oksenberg, S. Hauser
- P348** Increased severity of experimental autoimmune encephalomyelitis in B cell activating factor receptor-deficient mice is associated with elevated B cell activating factor expression
S. Kim (Davis, California, USA), D. Richman, S. Zamvil, M. Agius
- P349** Distinct cerebrospinal fluid cytokine/chemokine profiles in optospinal multiple sclerosis, atopic myelitis and other causes of myelitis
J. Kira (Fukuoka, Japan), M. Tanaka, T. Matsushita, T. Matsuoka, T. Tateishi, M. Minohara
- P350** $\gamma\delta$ T cell-derived IL-1 β alters the pattern of expression of CXCL12 at the blood-brain barrier during central nervous system autoimmunity
E. McCandless, J. Lees, D. Dorsey, J. Russell, R. Klein (St. Louis, Missouri, USA)
- P351** Ablation of peroxisome proliferator-activated receptor gamma in CD4+ T cells results in enhanced central nervous system autoimmunity caused by an increase in antigen specific T helper 17 cells
L. Klotz (Bonn, Germany), I. Dani, W. Kolanus, A. Waisman, T. Klockgether, P. Knolle
- P352** Prohibitin: prohibiting inflammation in glatiramer acetate-treated multiple sclerosis patients?
M. Knop (Munich, Germany), V. Vargal-Leal, H. Faber, S. Lutz, F. Müller-Sarnowski, J. Hornung, C. Turck, F. Weber
- P353** Evidence of specific T-cell priming from the first-in-man single ascending dose study of peptide copolymer PI-2301 for the treatment of multiple sclerosis
J. Kovalchin (Cambridge, Massachusetts, USA), J. Krieger, K. Collins, K. Rafuse, T. Avril, G. Gandon, A. Patat, N. Fauchoux, U. Patel, E. Mascioli, E. Zanelli
- P354** Changes in adhesion molecule expression induced by natalizumab treatment in multiple sclerosis
J. Kraus (Salzburg, Austria), G. Pilz, P. Wipfler, S. Afazel, E. Haschke-Becher, M. Huemer, M. Jakob, M. Ritter, G. Ladurner for the Research Group of Neuroimmunology and Multiple Sclerosis
- P355** Low-dose subcutaneous alemtuzumab effectively reduces key lymphocyte subpopulations in patients with severe relapsing-remitting multiple sclerosis
S. Kuckert (Cologne, Germany), C. Nickenig, V. Limmroth
- P356** Cerebrospinal fluid B cells correlate with early brain inflammation in multiple sclerosis
B. Kuenz (Innsbruck, Austria), A. Lutterotti, R. Ehling, C. Gneiss, M. Haemmerle, M. Schocke, T. Berger, M. Reindl
- P357** IL -7 Receptor Alpha Chain discriminates between a normal regulatory and a hyperproliferative proinflammatory T cell subset in patients with relapsing-remitting multiple sclerosis
D. Laplaud (Nantes, France), L. Michel, L. Berthelot, S. Pettre, S. Wiertelowski, F. Lefrere, S. Brouard, J. Souillou
- P358** Posterior reversible encephalopathy syndrome in neuromyelitis optica spectrum disorders
M. Matiello (Rochester, Minnesota, USA), S. Magana, S. Pittock, V. Lennon, A. McKeon, O. Kantarci, E. Shuster, A. Rabinstein, C. Lucchinetti, B. Weinshenker
- P359** Pregnancy as a natural modulator of innate immunity in MS. Data from the Rotterdam Pregnancy MS Study
R. Neuteboom (Rotterdam, Netherlands), E. Verbraak, J. Voerman, M. Van Meurs, A. Wieringa, E. Steegers, C. De Groot, J. Laman, R. Hintzen

POSTER SESSION 1

P360 Aquaporin-4 autoantibodies define autoimmune optic neuritis
A. Petzold (London, United Kingdom), S. Pittock, V. Lennon, C. Maggione, B. Weinschenker, G. Plant

P361 Natural naive regulatory T cell development and function are disturbed in multiple sclerosis patients
K. Venken, N. Hellings, K. Hensen, J. Rummens, P. Stinissen (Diepenbeek, Belgium)

P362 Immunological and clinical status 14 months after cessation of natalizumab therapy
O. Stuve (Dallas, Texas, USA), P. Cravens, K. Treadaway, T. Phillips, G. Remington, G. von Geldern, S. Cepok, M. Singh, J. Cohen Tervaert, M. De Baets, D. MacManus, D. Miller, E. Radue, E. Cameron, N. Monson, R. Kim, B. Hemmer, M. Racke

P363 FOXP3 and cytokine profile in patients with optic neuritis
A. Tsakiri (Glostrup, Denmark), D. Tsiantoulas, S. Ravanidis, J. Frederiksen, N. Grigoriadis

Rehabilitation and Quality of Life

P364 A comparison of two community-based leg strengthening programs for persons with multiple sclerosis
L. Adamson (Thunder Bay, Ontario, Canada), C. Tombs

P365 Comparison of fatigue and quality of life in relapsing-remitting multiple sclerosis, primary progressive multiple sclerosis and neuromyelitis optica: analysis of 100 Brazilian patients
H. Alvarenga-Filho (Rio de Janeiro, Brazil), L. Nogueira, S. Ferreira, R. Papais-Alvarenga, K. Lopes, F. Nobrega

P366 Pulmonary function in relapsing-remitting multiple sclerosis without respiratory complaints
H. Alvarenga-Filho (Rio de Janeiro, Brazil), R. Dias, F. Chacur, S. Carvalho, R. Papais-Alvarenga

P367 Fatigued patients with multiple sclerosis have impaired central motor activation and timed walking compared with non-fatigued patients
A. Andreasen (Aarhus, Denmark), H. Andersen, J. Jakobsen

P368 The effects of high-voltage pulsed galvanic stimulation on fatigue in multiple sclerosis patients
N. Cetisli Korkmaz, K. Armutlu (Ankara, Turkey), I. Keser, N. Kirdi, R. Karabudak

P369 From efficacy to effectiveness: does a nurse-led cognitive behavior therapy intervention work in patients with multiple sclerosis in the real-life clinical setting?
S. Askey-Jones (London, United Kingdom), E. Silber, A. David, T. Chalder, P. Shaw, R. Gray

P370 Expanding the role of exercise in the lives of persons with multiple sclerosis
A. Blumer (Edmonton, Alberta, Canada), G. Wheeler, S. Rattray, K. Johnson

P371 www.msinfowiki.ca: stay connected online
A. Blumer (Edmonton, Alberta, Canada)

P372 Analysis of an intensive neurorehabilitation therapy in MS: a clinical trial
J. Cabrera-Gomez (Havana, Cuba), Y. Real-Gonzalez, R. Diaz-Marquez, A. Echemendia Del Valle, A. Gonzalez-Quevedo, G. Martinez-Aching, M. Lopez-Hernandez, J. Torres Izquierdo, R. Gomez-Perez, N. Torriente-Herrera, Y. Valle-Ramos

P373 Are there relationships between fatigue, subjective sleep quality and depression in MS patients?
R. Montenegro-Rodrigues, L. Calia (São Paulo, Brazil), G. Calia, J. Santos, A. Carlesse

P374 Racial disparities in adherence to disease-modifying agents and quality of life in patients with MS
M. Cergnet (Detroit, Michigan, USA), L. Schultz, E. Dobie, J. Reuther, S. Elias, J. Elston Lafata

P375 Sociological characteristics of MS patients
L. Dezmalj Grbelja (Zagreb, Croatia), R. Covic Negovetic, V. Demarin

P376 DELPHI-QOL: a study of physicians' opinions about the diagnosis, treatment and quality of life management of multiple sclerosis
M. Dhooghe (Melsbroek, Belgium), D. Decoo, D. Dive, E. Bartholomé, A. Vanderperre

P377 Evaluation of a computerized cognitive training program in patients with impaired working memory functions
L. Doessegger (Basel, Switzerland), A. Vogt, M. Stöcklin, P. Calabrese, K. Opwis, L. Kappos, I. Penner

P378 Occurrence of restless legs syndrome in multiple sclerosis
A. Doneva (Bitola, Macedonia), V. Daskalovska

P379 Psychometric validation of daily life scale aimed at evaluating living abilities in multiple sclerosis patients
T. Moreau, O. Heinzlef, P. Clerson, M. Dubois (Lys Lez Lannoy, France)

P380 Working memory in multiple sclerosis: methodological discussion of a cognitive rehabilitation intervention
A. Legrand, N. Ehrlé (Reims, France), A. Tourbah, M. Chaunu, J. Visy, J. Vaunaize, S. Bakchine

P381 Iranian network of multidisciplinary clinics for multiple sclerosis, a view of existing experiences and future horizons
H. Ekhtari (Tehran, Iran), H. Sikaroodi, M. Sahraian, M. Oghabian, J. Lotfi, M. Noroozian, H. Soltanian Zadeh, H. Safaei, A. Mokri, S. Zarei, N. Khalili Mahani

P382 Walking and Expanded Disability Status Scale: are self-estimated walking distances accurate?
K. Armutlu, K. Balci, A. Fil (Ankara, Turkey), R. Karabudak

P383 Sensory re-education reduces sensory deficits in multiple sclerosis patients
S. Gelav (Ramat-Gann, Israel), M. Greenberg-Abrahami, A. Achiron

P384 The use of acupuncture in multiple sclerosis patients with pain: a retrospective review
M. Giacomo (Sao Paulo, Brazil), L. Russo

P385 Effects of a high-intensity resistance training program on strength, mobility and fatigue in moderately severe individuals with multiple sclerosis
H. Hayes (Salt Lake City, Utah, USA), E. Gappmaier, L. Dibble, P. LaStayo for the Skeletal Muscle Exercise Research Facility

- P386** Safety and feasibility of a high-intensity resistance training program for individuals with multiple sclerosis
H. Hayes (Salt Lake City, Utah, USA), E. Gappmaier, L. Dibble, P. LaStayo for the Skeletal Muscle Exercise Research Facility
- P387** Motivational interviewing intervention to preserve employment in multiple sclerosis: promoting self-efficacy in the workplace
K. Johnson (Seattle, Washington, USA), A. Bamer, R. Fraser
- P388** Development of International Classification of Functioning, Disability, and Health Core Sets for multiple sclerosis
J. Kesselring (Valens, Switzerland), M. Coenen, L. Holper, S. Kus, A. Weise, A. Leib, G. Stucki, A. Cieza
- P389** Fatigue and depression in pediatric multiple sclerosis and monophasic variants
I. Ketelslegers (Rotterdam, Netherlands), R. Neuteboom, M. Boon, C. Catsman-Berrevoets, R. Hintzen
- P390** Withdrawn
- P391** Effects of pregnancy on the disease course in Iranian multiple sclerosis patients
J. Lotfi, M. Sahraian, S. Khorramnia (Tehran, Iran), M. Mohammad Ebrahim
- P392** Health-related quality of life in 1269 patients with multiple sclerosis: dissociation between physical and psychological wellbeing
C. Knorr (Mannheim, Germany), P. Flachenecker, H. Geiger, H. Meissner, S. Schwarz
- P393** Effect of a single dose of intrathecal baclofen on spasticity, muscle strength and walking speed in multiple sclerosis
P. Koch (Cleveland, Ohio, USA), F. Bethoux, D. Stough
- P394** Health care needs of patients with multiple sclerosis in the first year after diagnosis
J. Eggers, T. Deister, D. Pöhlau, U. Hofstadt-van Oy, J. von Schrader, H. Wilhelmi, K. Mattes, S. Fischbeck, J. Koehler (Hamburg, Germany)
- P395** Assessment protocol for music therapy in patients with optic neuritis
C. Loureiro (Belo Horizonte, Brazil), M. Lana-Peixoto, L. Simao, C. Araujo, L. Talim, G. Teixeira for the CIEM MINAS UFMG Center for Investigation of Multiple Sclerosis
- P396** Early effects of music therapy on the visual quality of life in optic neuritis
C. Loureiro (Belo Horizonte, Brazil), M. Lana-Peixoto, L. Simao, C. Araujo, L. Talim, G. Teixeira for the CIEM MINAS UFMG Center for Investigation of Multiple Sclerosis
- P397** Self-reported fatigue and quality of life in pediatric multiple sclerosis
W. MacAllister (New York, New York, USA), T. Preston, R. Troxell, C. Christodoulou, M. Milazzo, Y. Patel, A. Belman, L. Krupp
- P398** Does an innovative automated recruitment process generate an unbiased study sample from a pool of eligible patients?
D. Miller (Cleveland, Ohio, USA), R. Fox, A. Atreja, S. Moore, A. Jain, A. Fu, J. Lee, W. Sapue, S. Chakraborty, R. Rudick
- P399** The Neuro-QoL project: implications for multiple sclerosis research
D. Miller (Cleveland, Ohio, USA), D. Victorson, C. Nowinski, A. Peterman, D. Cella
- P400** Oral fingolimod (FTY720) in relapsing multiple sclerosis: impact on health-related quality of life in a phase II study
X. Montalban (Barcelona, Spain), G. Comi, J. Antel, P. O'Connor, S. Gold, A. de Vera, G. Rapatz, B. Eckert, L. Kappos
- P401** Familiarity of family physicians with relapse evaluation and treatment in patients with multiple sclerosis
S. Morrow (London, Ontario, Canada), M. Kremenchutzky
- P402** Health-related quality of life is reduced in children with multiple sclerosis
E. Mowry (San Francisco, California, USA), L. Julian, D. Chabas, S. Im-Wang, J. Strober, P. Katz, E. Waubant
- P403** Single treatment with inflatable pressure splint improves short distance gait velocity in patients with multiple sclerosis
D. Nitzani (Tel-Hashomer, Israel), R. Tzemah, S. Liraz Zaltsman, A. Kalron, A. Achiron
- P404** Socioeconomic impact of multiple sclerosis in the Mississippi Delta
A. Pande (Jackson, Mississippi, USA)
- P405** Experience of an out-patient multidisciplinary approach in disabled multiple sclerosis patients
C. Papeix (Paris, France), P. Charles, A. Kopf, K. Youssov, L. Mailhan, R. Assouad, B. Stankoff, O. Lyon-Caen, C. Lubetzki
- P406** Quality of life in multiple sclerosis: the role of social support
M. Pattini (Fidenza, Italy), I. Pesci, L. Manneschi, A. Guareschi, F. Cenci, E. Montanari
- P407** Transcultural adaptation and validation of the Six Spot Step Test in a Brazilian population
K. Pavan (Sao Paulo, Brazil), C. Tilbery for the Comite de Etica em Pesquisa Santa Casa
- P408** Association between the number of years with the diagnosis of multiple sclerosis and perception of autonomy and participation in persons with the disease
L. Pedro (Lisbon, Portugal), J. Pais Ribeiro
- P409** Visuo-proprioceptive rehabilitation improve postural control in patients with multiple sclerosis
L. Prosperini (Rome, Italy), P. De Carli, M. Mannocchi, D. Riva, F. Rocca, G. Cavaniglia, C. Pozzilli
- P410** Quality of life in 1000 patients with relapsing-remitting multiple sclerosis and the impact of treatment initiation with intramuscular interferon beta-1a
N. Putzki (Essen, Germany), H. Hartung for the Study Group Mensch im Mittelpunkt
- P411** Changes of clinical functions after neurorehabilitation and aerobic training correlate with changes of the brain activity pattern as a reaction to complex motor stimulation in multiple sclerosis
K. Rasova (Prague, Czech Republic), J. Tintera, D. Zimova, A. Herbenova, H. Kalistova, L. Sobotkova, P. Brandejsky, R. Jech, M. Rasova, J. Zeman, P. Zemanova, O. Smitkova, I. Ibrahim, P. Martinkova, D. Dolezil, D. Jandova

POSTER SESSION 1

- P412** Patient perspectives on quality in mental health care for people with multiple sclerosis
D. Rintell (Brookline, Massachusetts, USA), D. Frankel
- P413** Employment discrimination experiences of adults with multiple sclerosis
R. Roessler (Fayetteville, Arkansas, USA), P. Rumrill
- P414** A prospective study on clinical outcome of inpatient versus outpatient rehabilitation in subjects with multiple sclerosis
B. Ciccone, F. Martinelli Boneschi, E. Judica, P. Rossi (Milano, Italy), P. Vivo, M. Comola, G. Griso, C. Crisci, G. Comi
- P415** The relationship between baseline clinical measures and quality of life in patients with relapsing multiple sclerosis: analyses from the phase 3 trial of intramuscular interferon beta-1a
R. Rudick (Cleveland, Ohio, USA), D. Miller, B. Weinstock-Guttman, D. Bourdette, P. Foulds, X. You
- P416** Hippotherapy for multiple sclerosis - pilot study assessing effects on balance, spasticity, ability to walk and quality of life
A. Sager (Cologne (Köln), Germany), M. Drache, B. Schaar, D. Pöhlau
- P417** Efficacy of a computer-based cognitive training program on the cognitive performance of patients with multiple sclerosis
E. Shatil (Yokneam Ilit, Israel), O. Horowitz, A. Metzger, A. Miller
- P418** Development and evaluation of a self-management cognitive program for multiple sclerosis
E. Shevil (Tel Aviv, Israel)
- P419** Quality of visual life outcomes in Brazilian multiple sclerosis patients
L. Simao (Belo Horizonte, Brazil), M. Lana-Peixoto, C. Araujo, M. Moreira
- P420** Gait and balance improved in patients with multiple sclerosis after inpatient physiotherapy
T. Smedal (Bergen, Norway), K. Myhr, B. Gjelsvik, A. Beiske, S. Glad, A. Skår, K. Huser, J. Aarseth, L. Strand
- P421** Factors associated with change in quality of life, disease level and functional status since natalizumab initiation
J. Stephenson (Wilmington, Delaware, USA), K. Rajagopalan, S. Kamat
- P422** Longitudinal individualized analysis of computer-based cognitive rehabilitation in multiple sclerosis
R. Chaliman, F. Perez, G. Suarez (Houston, Texas, USA), V. Rivera, G. Hutton
- P423** WHO/MSIF Atlas of MS: multiple sclerosis resources across the world
A. Thompson (London, United Kingdom), P. Rompani, T. Dua, I. Douglas, M. Battaglia, B. Porter
- P424** Quality adjusted life years: quantifying the impact of disease progression on the quality of life of persons with multiple sclerosis
K. Turpin (Edmonton, Alberta, Canada), S. Warren, G. Wheeler, K. Warren
- P425** Is fatigue a predictor of the efficacy of rehabilitation in multiple sclerosis patients?
D. Ungaro (Milano, Italy), E. Judica, L. Merlino, F. Martinelli Boneschi, P. Rossi, M. Comola, G. Comi
- P426** Quality and needs assessment for collaborative palliative care in the progressive multiple sclerosis population
K. Waspe (Burnaby, British Columbia, Canada), R. Reebye, G. Vorobeychik
- P427** The functional index for living with multiple sclerosis: development and preliminary results
J. Wesson (Berkeley, California, USA), J. Cooper, J. Barber, S. Lockhart, K. Draney, J. Dalio, A. Linton
- P428** Women's health and pregnancy in patients with multiple sclerosis
A. Wundes (Seattle, Washington, USA), A. Bamer, R. Salem, V. Warner, D. Amtmann
- P429** First results from a randomized-controlled trial of a group-based intervention intended to promote knowledge and self-management strategies in patients with multiple sclerosis
S. Kern, W. Schrempf, T. Schultheiss, H. Schneider, H. Reichmann, T. Ziemssen (Dresden, Germany)

Symptom Management

- P430** Gait apraxia in multiple sclerosis
N. Abou Zeid (Rochester, Minnesota, USA), B. Weinshenker, M. Keegan
- P431** Menstrual cycle and menopause in patients with multiple sclerosis. How do these affect the symptoms of disease?
M. Avila (Houston, Texas, USA), G. Suarez, D. Brandt, J. Ramirez, G. Hutton, V. Rivera
- P432** Anxiety in multiple sclerosis: prevalence and associated factors in a large community sample
A. Bamer (Seattle, Washington, USA), D. Amtmann, D. Ehde, K. Johnson
- P433** Use of antidepressants for treatment of depression, pain, fatigue, and sleep in multiple sclerosis
A. Bamer (Seattle, Washington, USA), V. Warner, K. Johnson
- P434** Clinical and radiological findings in patients with multiple sclerosis and pain
L. Grau (Barcelona, Spain), S. Sierra, E. Martínez-Cáceres, C. Ramo-Tello
- P435** Urodynamics profile and urinary symptoms in a multiple sclerosis population
S. Galgani, G. Bolla, S. Haggiag (Rome, Italy), C. Gasperini
- P436** Use of a self-reported questionnaire to describe the impact of multiple sclerosis on patients' disability and daily functioning
S. Hum (Montréal, Québec, Canada), C. Renoux, Y. Lapierre
- P437** Investigation of retinal nerve fiber layer in multiple sclerosis with optical coherence tomography
I. Aydin Canturk, O. Arici Duz, T. Aydin, N. Isik (Istanbul, Turkey), N. Yildiz, F. Candan, S. Ari Yaylali, A. Ardagil Akçakaya, H. Acar, H. Erbil

- P438** Myelopathy associated with Sjögren's syndrome: comparison with neuromyelitis optica and longitudinally extensive transverse myelitis
S. Kim (Sung-Nam, South Korea), S. Kim, S. Oh, K. Park, S. Park
- P439** Bone mineral density, motor function, and vitamin D status in fully ambulatory persons with relapsing-remitting multiple sclerosis - population based cross-sectional data
S. Mellgren (Tromsø, Norway), L. Steffensen, M. Kampman
- P440** A randomized placebo-controlled double-blind study reconsidering modafinil for treatment of fatigue in multiple sclerosis
F. Moeller (Hamburg, Germany), J. Poettgen, F. Broemel, A. Bach, C. Restemeyer, A. Moench, C. Heesen
- P441** Symptom cluster as a predictor of physical activity in multiple sclerosis: preliminary evidence
R. Motl (Urbana, Illinois, USA), E. McAuley
- P442** Complementary and alternative therapy use in multiple sclerosis: counting the cost
S. Murphy (Dublin, Ireland)
- P443** Efficacy results of a study of THC:CBD in central neuropathic pain due to multiple sclerosis
S. Ratcliffe (Blackpool, United Kingdom), L. Metz, Z. Ambler
- P444** Relationship between fatigue, sleep and symptoms of multiple sclerosis
E. Reilly (Egham, United Kingdom), D. Langdon, E. Silber
- P445** Can head and neck cooling improve symptoms of multiple sclerosis?
L. Reynolds (Cleveland, Ohio, USA), S. Cheung, C. Short, D. Westwood
- P446** Premature ovarian failure prevention during mitoxantrone treatment in women with multiple sclerosis
C. Rivoiro (Orbassano, Italy), M. Clerico, G. Contessa, A. Cucci, P. Barbero, A. Tavella, F. Bruno, L. Durelli
- P447** Influence of 5-year glatiramer acetate therapy on prevalence of lower urinary tract dysfunction in relapsing-remitting multiple sclerosis
P. Shvarts (Moscow, Russian Federation), I. Zavalishin
- P448** Clinical characteristics of multiple sclerosis associated with uveitis
E. Thouvenot (Montpellier, France), M. De verdal, C. Schneider, F. Mura, B. Carlander, M. Charif, G. Taieb, C. Geny, W. Camu
- P449** Sleep abnormalities in multiple sclerosis patients
D. Trojan (Montréal, Québec, Canada), D. Da Costa, A. Bar-Or, A. Benedetti, Y. Lapierre, D. Arnold, A. Robinson, A. Venturini, M. Kaminska, K. Schwartzman, R. Kimoff
- P450** Service provision and symptom management for multiple sclerosis patients in a British supraregional multiple sclerosis service
C. Young (Liverpool, United Kingdom), A. Nandhra, M. Calabresi

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