

POSTER SESSION 1 (Thursday, Dec 15th)

A1: Selected Growth Hormone Secretagogues (GHS) decrease mutant SOD1 toxicity in an *in vitro* model of amyotrophic lateral sclerosis.

Meanti R., Rizzi L., Bresciani E., Licata M., Molteni L., Locatelli V., Torsello A. (Monza)

A2: Extracellular vesicles derived from mesenchymal stem cells revert astroglial activation and neurotoxicity in *in-vitro* models of amyotrophic lateral sclerosis.

Milanese M., Provenzano F., Nyberg S., Giunti D., Torazza C., Parodi B., Usai C., Kerlero de Rosbo N., Uccelli A., Shaw J.P., Ferraiuolo L., Bonanno G. (Genova, Sheffield, Roma)

A3: New therapeutic intervention for amyotrophic lateral sclerosis: analysis of the effects of acetazolamide on the biophysical properties of skeletal muscle in a transgenic mouse model.

Canfora I., Tarantino N., Mantuano P., Cappellari O., Conte E., Camerino G.M., Dobrowolny G., Musarò A., De Luca A., Pierno S. (Bari, Roma)

A4: Boosting the peripheral immune response in the skeletal muscles improved motor function in Amyotrophic Lateral Sclerosis (ALS) transgenic mice.

Trolese M.C., Scarpa C., Melfi V., Fabbriozzi P., Sironi F., Rossi M., Bendotti C., Nardo G. (Milano)

A5: Montelukast counteracts pathological GPR17 upregulation, oligodendrocyte dysfunction and delays disease progression in SOD1G93A amyotrophic lateral sclerosis female mice.

Raffaele S., Nguyen N., Boccazzi M., Frumento G., Milanese M., Bonanno G., Abbracchio M.P., Bonifacino T., Fumagalli M. (Milano, Genova)

A6: Blocking immune cell infiltration of the central nervous system to tame neuroinflammation in amyotrophic lateral sclerosis.

Garofalo S., Cocozza G., Bernardini G., Savage J., Raspa M., Aronica E., Tremblay M.-E., Ransohoff R.M., Santoni A., Limatola C. (Roma, Pozzilli, Victoria, Amsterdam)

A7: The negative allosteric modulator CTEP ameliorates the reactive phenotype of astrocytes from patients affected by amyotrophic lateral sclerosis.

Tessitore S., Torazza C., Mandeep K., Shaw A., Shaw P.J., Bonanno G., Milanese M. (Genova, Sheffield)

A8: The feeding behavior of ALS mouse models is modulated by the Ca²⁺-activated KCa3.1 channels.

Cocozza G., Garofalo S., Limatola C. (Pozzilli, Roma)

A9: Genotype-phenotype correlation in Phelan-McDermid Syndrome.

Capra A.P., La Rosa M.A., Briuglia S., Esposito E. (Messina)

A10: miRNAs and isomiRs: serum-based biomarkers for the development of Intellectual Disability and Autism Spectrum Disorder in Tuberous Sclerosis Complex

Romagnolo A., Scheper M., Besharat Z.M., Iyer A., Moavero R., Hertzberg C., Weschke B., Riney K., Feucht M., Scholl T., Petrak B., Maulisova A., Nabbout R., Jansen A.C., Jansen F.E., Lagae L., Urbanska M., Ferretti E., Tempes A., Blazejczyk M., Jaworski J., Kwiatkowski D.J., Jozwiak S., Kotulska K., Sadowski K., Bortowska J., Curatolo P., Mills J.D., Aronica E. (Amsterdam, Roma, Rotterdam, Berlin, St. Lucia, Vienna, Prague, Paris, Antwerp, Utrecht, Leuven, Warsaw, Boston)

A11: Stress granules formation and cell survival are reduced in Fmr1 knockout astrocytes after exposure to oxidative stress.

Spatuzza M., Di Marco B., Dell'Albani P., Bonaccorso C.M., D'Antoni S., Catania M.V. (Catania, Troina)

A12: Functional and pharmacological study of a novel mutation in the voltage-gated potassium channel Kv1.1 associated with epilepsy, ataxia and developmental delay.

Dinoi G., Conte E., Morin M., Mor Shaked H., Coppola M.D., D'Adamo M.C., Elpeleg O., Hartmann I., Blunck R., Russo A., Liantonio A., De Luca A., Imbrici P. (Bari, Montreal, Jerusalem, Zerifin, Bologna)

A13: A novel loss-of-function SEMA3E mutation in a patient with severe intellectual disability and cognitive regression.

Paganoni A., Amoruso F., Vezzoli V., Oleari R., Fernández-Jaén A., Cariboni A. (Milano, Madrid)

A14: Expression of a secretable, cell-penetrating CDKL5 protein enhances the efficacy of AAV vector-mediated gene therapy for CDKL5 deficiency disorder.

Loi M., Medici G., Tassinari M., Galvani G., Bastianini S., Gennaccaro L., Mottolise N., Alvente S., Berteotti C., Zoccoli G., Rappe Bagget H., Nakai H., Trazzi S., Ciani E. (Bologna, Portland, Beaverton)

A15: CREB1 expression is correlated with the expression of apolipoprotein E and apolipoprotein CI in glioblastoma.

Radu I., Fuior E.V., Radu R., Petrescu G., Brehar F., Gafencu A.V. (Bucharest)

A16: Clinical involvement of Dickkopf protein-related protein 3 (DKK3) and prolyl oligopeptidase in glioblastoma multiforme tumor progression and in metastasis.

Campolo M., Casili G., Paterniti I., Caffo M., Cuzzocrea S., Esposito E. (Messina)

A17: Cohesin and PARP inhibitors: a possible new therapeutic strategy for pediatric medulloblastoma.

Lettieri A., Grazioli P., Gervasini C., Massa V. (Milano)

A18: Neuroprotective effects of GSK343, an inhibitor of EZH2, in reducing brain tumor progression modulating inflammatory and apoptotic processes.

Casili G., Scuderi S.A., Filippone A., Basilotta R., Mannino D., Capra A.P., Chisari G., Colarossi L., Sava S., Campolo M., Cuzzocrea S., Esposito E., Paterniti I. (Messina, Viagrande)

A19: Positive feedback of apoptosis and autophagy pathways by sodium propionate to control brain tumor progression through PPAR γ signaling: correlating *in vitro* and *in vivo* observations.

Filippone A., Casili G., Lanza M., Scuderi S.A., Mannino D., Campolo M., Paterniti I., Capra A.P., Cuzzocrea S., Esposito E. (Messina)

A20: C5aR1 as a new potential therapeutic target for the prevention of chemotherapy-induced peripheral neuropathy and hypersensitivity reactions.

Boccella S., Cocchiari P., Giorgio C., Brandolini L., D'Angelo M., Castelli V., Sirico A., Ruocco A., Amendola P., Novelli R., Cristiano C., Russo R., Cimini A., Aramini A., Allegretti M. (Napoli, L'Aquila, Milano)

A21: First experiences in real life with difelikefalin in resistant and severe uremic pruritus (CKDaP).

Palladini A., Manenti L., Benigno G., Pacchiarini M.C., Fiaccadori E. (Parma)

A22: Release-regulating sphingosine 1-phosphate 1/3 receptors in cortical synaptosomes and gliosomes of mice suffering from experimental autoimmune encephalomyelitis: impact of fingolimod.

Roggeri A., Vallarino G., Olivero G., Usai C., Prickaerts J., Vanmierlo T., Pittaluga A. (Genova, Maastricht, Hasselt)

A23: Complement controls glutamate transmission in cortical glutamate tripartite synapses of mice suffering from experimental autoimmune encephalomyelitis.

Olivero G., Vallarino G., Roggeri A., Trebesova H., Luccarini E., Gagliani M.C., Cortese C., Di Cesare Mannelli L., Grilli M., Gherardini C., Pittaluga A. (Genova, Firenze)

A24: A new formulation of Pomegranate-Peel Extract recovers spinal astrocytosis and microglia activation in an animal model of multiple sclerosis.

Taddeucci A., Vallarino G., Roggeri A., Olivero G., Turrini F., Lucarini S., Boggia R., Di Cesare Mannelli L., Gherardini C., Pittaluga A. (Genova, Firenze)

A25: Rewiring of glucose and lipid metabolism induced by GPR17 silencing enables the transition of oligodendrocyte progenitors to myelinating cells.

Marangon D., Audano M., Pedretti S., Fumagalli M., Mitro N., Lecca D., Caruso D., Abbracchio M.P. (Milano)

A26: The anti-asthmatic drug montelukast promotes oligodendrocyte maturation in a model of neuroinflammation *in vitro*.

Castro e Silva J.H., Boccazzi M., Peri C., Murtaj V., Marangon D., Lecca D., Panina-Bordignon P., Martino G., Abbracchio M.P. (Milano)

A27: Purple corn anthocyanins as a nutraceutical approach to control the progression of multiple sclerosis and associated trigeminal pain: role of glial cells. Riboldi B., Magni G., Marinelli A., Romano S., Narbad A., Nicoletti C., Di Lorenzo C., Petroni K., Ceruti S. (Milano, Norwich)

A28: Delayed expression of myelin specific markers in mice lacking mGlu3 metabotropic glutamate receptors.

Ginerete R.P., Ceccherelli A., Mascio G., Battaglia G., Bruno V., Nicoletti F., Orlando R.M. (Pozzilli, Roma)

A29: Melatonin modulates microglial responses in inflammatory conditions: study in cultured human microglia and in organotypic brain slices.

Caruso G.I., Korde D., Bonfili L., Eleuteri A.M., Hunpel C., Sortino M.A., Merlo S. (Catania, Innsbruck, Camerino)

A30: Anti-inflammatory effect of Conjugated Linoleic Acid isomers on activated microglia.

Porcedda C., Piras F., Murru E., Manca C., Carta G., Setzu M.D., Banni S., Sogos V. (Cagliari)

A31: Microglial metabotropic glutamate receptors 2/3 modulate blood brain barrier function.

Costantino G., Trabace L., Corso G., Sortino M.A., Spampinato S.F. (Foggia, Catania, Torino)

A32: Microglia cooperates with astrocytes in the modulation of blood-brain barrier function.

Spampinato S.F., Costantino G., Merlo S., Sortino M.A. (Torino, Foggia, Catania)

A33: SEMA6A drives GnRH neuron-dependent puberty onset by tuning median eminence vascular permeability.

Oleari R., Lettieri A., Verhagen M., Tacconi C., Paganoni A., Azzarelli R., Palazzolo L., Eberini I., Dunkel L., Howard S., Fantin A., Pasterkamp J., Cariboni A. (Milano, Utrecht, Cambridge, London)

A34: Structural and molecular characterization of the gut in rodent models of acquired epilepsy induced by acute brain injuries.

Kebede V., Barbarossa D., Craparotta I., Canali L., Riva A., Petretto A., Di Sapia R., Striano P., Ravizza T., Vezzani A. (Milano, Genova)

A35: Sun11602, a bFGF mimetic, improves neurons survival and attenuates neuroinflammation in an *in vivo* model of traumatic brain injury.

Ardizzone A., Filippone A., Bova V., Lanza M., Casili G., Campolo M., Paterniti I., Cuzzocrea S., Esposito E. (Messina)

A36: Investigation of the neuroregenerative effects of graphene and α -lipoic acid in *in vitro* spinal cord injury models.

Celic K., Kayhan B., Sendemir A., Sengul G. (Bornova/İzmir)

A37: The development of ADAM10 endocytosis inhibitors for the treatment of Alzheimer's disease.

D'Andrea L., Musardo S., Therin S., Pelucchi S., Stringhi R., Ribeiro A., Manca A., Balducci C., Pagano J., Sala C., Verpelli C., Grieco V., Edefonti V., Forloni G., Gardoni F., Meli G., Di Marino D., DiLuca M., Marcello E. (Milano, Roma, Lodi, Ancona)

A38: Cell fate modulation of adult hippocampal neural progenitor cells by an ADAM10 endocytosis inhibitor.

Brai E., Bortolotto V., De Cicco G., Gibin Borzoni G., Canonico P.L., Stringhi R., La Greca F., Scheggia D., DiLuca M., Marcello E., Grilli M. (Novara, Milano)

A39: Regulation of Astrocyte-Neural Progenitor cells crosstalk: role of CHI3L1.

Bortolotto V., Daffara M., Canonico P.L., Manfredi M., Marengo E., Grilli M. (Novara)

A40: Astrocytes as therapeutic tool in multiple sclerosis.

Abdullatef S., Bartocchetti M., Colombo E., Acquaviva M., Bassani C., De Angelis A., Conforti P., Ruffini F., Ottoboni L., Panna P., Martino G., Farina C. (Milano)

A41: Astrocyte TrkB signalling is a key target of S1P receptor modulators during neuroinflammation.

Colombo E., Bartocchetti M., Pascente R., Triolo D., Bassani C., Farina C. (Milano)

POSTER SESSION 2 (Friday, Dec 16th)

B1: Generation and characterization of the c19orf12 mutant zebrafish model.

Gnutti B., Agazzi P., Mignani L., Canino B.F., Cannone E., Schiavone M., Zizioli D., Borsani G., Finazzi D. (Brescia)

B2: Microglia-derived extracellular vesicles are involved in synaptic pruning *in vitro*.

D'Arrigo G., Lombardi M., Cutugno G., Lombardo M.T., Golia M.T., Sironi F., Ghidoni R., Bendotti C., Gabrielli M., Verderio C. (Vedano al Lambro, Milano, Brescia)

B3: NF- κ B p50 knock-out mice as animal model of neurodevelopmental disorders with a chronic inflammation phenotype.

Carone M., Latsi R.-A., Premoli M., Mastinu A., Maccarinelli G., Memo M., Bonini S.A. (Brescia)

B4: The role of glial-mediated signaling in the detrimental effects induced by repeated exposure to the synthetic cannabinoid receptor agonist JWH-018.

Pintori N., Castelli M.P., Mostallino R., Margiani G., Sgheddu C., Simola N., Pistis M., Fadda P., Di Chiara G., De Luca M.A. (Cagliari)

B5: Maternal immune activation leads to cytokine profile change and induces long-lasting alterations in male adolescent offspring.

Mostallino R., Santoni M., Mastio A., Pistis M., Castelli M.P. (Monserrato, Cagliari)

B6: Anxiolytic and neuroprotective effects of 2-pentadecyl-2-oxazoline (PEA-OXA) in a mouse model of high-fat diet-induced obesity.

Opallo N., Melini S., Del Piano F., Annunziata C., Meli R., Pirozzi C., Mattace Raso G., Lama A. (Napoli)

B7: Olaliamid, a mixture of N-acylethanolamines, limits neuroinflammation and anxiety-like behavior in a mouse model of high-fat diet induced obesity.

Melini S., Pirozzi C., Opallo N., Del Pinto F., Comella F., Annunziata C., Mattace Raso G., Meli R., Lama A. (Napoli)

B8: Deciphering the interplay between the unfolded protein response and insulin resistance in Down syndrome neuropathology.

Prestia F., Lanzillotta C., Di Domenico F. (Roma)

B9: Role of miR-802 in brain insulin signaling and its impact on Down syndrome.

Tramutola A., Barone E., Di Domenico F., Perluigi M. (Roma)

B10: CAPE and its synthetic derivative VP961 restore BACH1/Nrf2 axis in Down Syndrome.

Pagnotta S., Tramutola A., Di Domenico F., Barone E., Perluigi M. (Roma)

B11: Treatment with a β 2-adrenergic receptor agonist during adolescence: a strategy to improve hippocampal dendritic maturation and behavior in a mouse model of Down syndrome.

Emili M., Stagni F., Russo C., Bartesaghi R., Guidi S. (Bologna)

B12: Adolescence represents an important window of opportunity for the rescue of dendritic pathology with a BDNF mimetic in a mouse model of Down syndrome. Russo C., Emili M., Guidi S., Angelozzi L., Aicardi G., Bartesaghi R., Stagni F. (Bologna, Rimini)

B13: Genetic deletion of calcineurin B1 in astrocytes reduces the amyloid burden, and neuroinflammation and improves memory in acute and chronic mouse models of Alzheimer's disease.

Tapella L., Dematteis G., La Vitola P., Leva S., Dacomo L., Grilli M., Forloni G., Genazzani A.A., Balducci C., Lim D. (Novara, Milano)

B14: Protein synthesis inhibition and loss of homeostatic functions in astrocytes from an Alzheimer's disease mouse model: a role for ER-mitochondria interaction.

Dematteis G., Tapella L., Moro M., Tonelli E., Pistolato B., Jekabsone A., Grolla A.A., Corazzari M., Grilli M., Genazzani A.A., Lim D. (Novara, Kaunas)

B15: Unique alterations in adult hippocampal neural progenitors and their cross-talk with astrocytes in a murine model of Alzheimer's disease.

Pagano C.A., Bortolotto V., Canonico P.L., Dematteis G., Tapella L., Lim D., Grilli M. (Novara)

B16: *In vitro* characterization of NG2⁺ and NG2⁻ progenitor cells from hippocampi of adult mice: any relevance in AD pathogenesis?

Boni G., Bortolotto V., Pagano C.A., Grilli M. (Novara)

B17: Protective effect of natural antioxidants on Olfactory Ensheathing Cells exposed to amyloid- β : biological and molecular studies.

Pellitteri R., Sposito G., Bisicchia J., Spatuzza M., Raciti G., Campisi A. (Catania)

B18: β -Amyloid impairs the astrocyte-oligodendrocyte crosstalk required for myelination: preclinical evidence with co-ultramicrosized palmitoylethanolamide/ luteolin.

Facchinetti R., Valenza M., Voci V., Ciarla L., Gomiero C., Steardo L., Campolongo P., Scuderi C. (Roma, Padova, Benevento)

B19: BBB dysfunctions: the role of astrocytes from an Alzheimer's disease mouse model.

Moro M., Dematteis G., Tapella L., Genazzani A.A., Lim D., Grolla A.A. (Novara)

B20: Neuroinflammation and cognitive impairment in mice exposed to dietary AGEs.

Pucci M., Tirelli E., Aria F., Premoli M., Maccarinelli G., Mastinu A., Bonini S.A., Memo M., Uberti D.L., Abate G. (Brescia, New York)

B21: Study the role of gut-brain axes in cognitive defect induced by dietary glycotoxins.

Tirelli E., Pucci M., Abate G., Uberti D.L., Torri L., Villanacci V., Cadei M. (Brescia)

B22: Dysregulation of miR-543 in Parkinson's disease: impact on the neuroprotective gene SIRT1.

Scheper M., Mesarsova L., Mills J.D., Aronica A. (Amsterdam, Rotterdam)

B23: Effects of the probiotic formulation slab51 in *in vitro* and *in vivo* models of Parkinson's disease.

Alfonsetti M., Lombardozi G., Kacem Ben Haj M'Barek H.E., D'Angelo V., Castelli V. (L'Aquila)

B24: Protective effects of mitochondria-targeted treatment in rotenone-induced neurotoxicity in SH-SY5Y cells.

Celik K., Erdogan M.A., Guliz A., Dervis B., Taskiran D. (Istanbul)

B25: Heteromerization of dopamine D2 and oxytocin receptors in adult striatal astrocytes: effects on glutamate release.

Cervetto C., Amato S., Guidolin D., Pedrazzi M., Maura G., Agnati L.F., Marcoli M. (Genova, Padova, Modena)

B26: Heteromerization of dopamine D2 and oxytocin receptors in adult striatal astrocytes: biochemical and biophysical evidence.

Amato S., Cervetto C., Averna M., Guidolin D., Pedrazzi M., Capraro M., Passalacqua M., Bozzo M., Gatta E., Maura G., Agnati L., Marcoli M. (Genova, Padova, Modena)

B27: Neuroprotective effects of Antrodia Camphorate in a murine model of Parkinson's disease.

Basilotta R., Lanza M., Casili G., Cucinotta L., Filippone A., Campolo M., Paterniti I., Cuzzocrea S., Esposito E. (Messina)

B28: Anti-inflammatory effects of Nasco pomaces extract in the 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) mouse model of Parkinson's Disease.

Serra M., Parekh P., Morelli M. (Cagliari)

B29: Iron-fed microglia: an *in vitro* system to model microglial phenotype *in vitro* and test new therapies in neurodegenerative diseases?

Golia M.T., Cutugno G., Lombardo M.T., Scali V., Lombardi M., Benzi A., Astigiano C., Denti V., Paglia G., Bruzzone S., Verderio C. (Vedano al Lambro, Genova)

B30: Antioxidant and anti-inflammatory activity of carnosine in microglial cells challenged with A β oligomers.

Caraci F., Caruso G., Cardaci V., Privitera A., Fresta C.G., Grasso M., Weerasekara D., Musso N., Spampinato S.F., Merlo S., Sortino M.A., Lunte S.M. (Catania, Troina, Lawrence)

B31: Isolation and *in-vitro* characterization of the adult neural stem/progenitor cells from the human brain meninges.

Amenta A., Malik Z., Pruonto G., Di Chio M., Campanelli A., Dolci S., Ciarpella F., Pizzamiglio L., Cambria C., Antonucci F., Decimo I., Bifari F. (Milano, Verona)

B32: Generation of human brain organoids from adult brain meninges neural stem/progenitor cells.

Malik Z., Amenta A., Ciarpella F., Georgiana R., Pruonto G., Di Chio M., Dolci S., Campanelli A., Pizzamiglio L., Cambria C., Antonucci F., Riva M., Decimo I., Bifari F. (Milano, Verona, Rozzano)

B33: Investigation of stemness at gene expression level in neurosphere formation developed in 3D graphene hydrogel.

Zorba Yildiz A.P., Yavuz B., Abamor E.S., Darici H., Allahverdiyev A. (Istanbul, Baku)

B34: BAY-117082-driven NLRP3 inflammasome inhibition resolves nitro-glycerine (NTG) neuronal damage in *in vivo* model of migraine.

Lanza M., Filippone A., Scuderi S.A., Basilotta R., Casili G., Bova V., Paterniti I., Esposito E. (Messina)

B35: New insights into the role of the proprotein convertase subtilisin/kexin type 9 (PCSK9) in neurons.

Stringhi R., De Cesare G., Da Dalt L., D'Andrea L., La Greca F., Cambria C., Musardo S., Vandermeulen L., Pelucchi S., Gardoni F., Antonucci F., Scheggia D., Di Luca M., Norata D., Marcello E. (Milano)

B36: Seasonal variation in plasma levels of the anti-epileptic drug oxcarbamazepine.

Allegra S., Chiara F., Arrigo E., De Francia S. (Orbassano)

B37: A convenient method for extraction and analysis with High-Pressure Liquid Chromatography of catecholamine neurotransmitters in plasma and brain samples of mice.

Chiara F., Allegra S., Brescia I., Montarolo F., De Francia S. (Orbassano)

B38: Looking for glial cell contribute to both resilience and vulnerability to acute stress in rats.

Valenza M., Facchinetti R., Musazzi L., Barbon A., Milanese M., Popoli M., Bonanno G., Steardo L., Bonifacino T., Scuderi C. (Roma, Monza, Brescia, Genova, Milano)

B39: Stress-induced astroglial plasticity in a murine model of depressive-like behavior.

Bondi H., Bortolotto V., Novella A., Canonico P.L., Grilli M. (Novara)

B40: Neuroplasticity in a dish: set up of a high content analysis protocol in adult neural progenitor cells.

Castelvero F., Bortolotto V., Bondi H., Lim, D., Grilli M. (Novara)

B41: CIC-39: a novel promising small molecule for the treatment of Tubular Aggregate Myopathies and Duchenne Muscular Dystrophy.

Riva B., Pessolano E., Reano S., Filigheddu N., Pirali T., Genazzani A.A. (Novara)