

C.M.E. Credits

CME accreditation (valid for Italian participants only) for:

PHYSICIAN - neurology, psychiatry, palliative care, pharmacology and clinical toxicology, geriatrics, neurosurgery, physical medicine and rehabilitation, diabetes and metabolic diseases

PHARMACIST

BIOLOGIST

CME credits: 19

Italian CME credits will be granted to those participants who fully attend all sessions and duly fill in the evaluation questionnaires answering correctly 75% of the questions. An attendance certificate will be handed on site at the end of the event, whereas the credit certificate will be mailed.

ORGANIZING SECRETARIAT



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MORE THAN NEURONS:

toward a less neuronocentric view of brain disorders

December 1-3, 2016

Torino Incontra
Via Nino Costa, 8 - 10123 Torino

SCIENTIFIC ORGANIZERS

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CONFERENCE AIM

MORE THAN NEURONS:

toward a less neuronocentric view of brain disorders

Neurological and psychiatric disorders have long been perceived as the exclusive consequence of abnormalities in the most prominently affected cell types: neurons.

Increasing knowledge on newly identified functions of non-neuronal cells together with findings of their abnormalities in a variety of brain pathological states and in ageing now suggest a shift from a neurono-centric to a glial-inclusive viewpoint in neuroscience and in neuropsychopharmacology.

With this conference we would like to create the opportunity for discussion of recent preclinical and clinical findings implicating the involvement of non-neuronal cells in initiation, progression or protection of several neuropathologies. Our perspective is that therapeutic strategies aimed at improving/correcting not only neuronal but also non-neuronal cell state and functional performance may open new venues for relevant and undertreated brain diseases.

THURSDAY, DECEMBER 1

- 10.00

Onsite registration and badge distribution
- 13.00

Welcome & Introduction
- 14.00

OPENING HONORARY LECTURE - Introduced by Salvatore Cuzzocrea (Messina)

SPECTRUM OF ASTROGLIOPATHOLOGY: FROM ATROPHY AND LOSS OF FUNCTION TO REACTIVITY
Alexei J. Verkhratski (University of Manchester, Manchester, UK)
This lecture has been made possible through an unrestricted grant from 

SESSION 1. MTN IN NEUROINFLAMMATION AND NEURODEGENERATION (part 1)
Chairpersons: Maurizio Memo (Brescia) and Stefano Pluchino (Cambridge)

- 14.50

HARNESSING THE IMMUNE SYSTEM FOR REPAIR IN ALZHEIMER’S DISEASE
Kuti Baruch (Weizmann Institute of Science, Rehovot, Israel)
- 15.20

DISRUPTION OF THE ASTROCYTIC TNFR1-GDNF AXIS ACCELERATES MOTOR NEURON DEGENERATION AND DISEASE PROGRESSION IN AMYOTROPHIC LATERAL SCLEROSIS
Daniela Rossi (Istituti Clinici Scientifici Maugeri Spa-SB, Pavia, Italy)

- 15.50

NEURAL STEM CELL TRANSPLANTATION INDUCES STROKE RECOVERY BY UPREGULATING GLUTAMATE TRANSPORTER GLT-1 IN ASTROCYTES
Marco Bacigaluppi (San Raffaele University, Milano, Italy)

- 16.20

Discussion
- 16.40

Coffee break

SESSION 1. MTN IN NEUROINFLAMMATION AND NEURODEGENERATION (part 2)
Chairpersons: Bianca Marchetti (Catania) and Anna Pittaluga (Genova)

- 17.15

STEM CELL SIGNALLING AND REPAIR OF MULTIPLE SCLEROSIS BRAIN
Stefano Pluchino (University of Cambridge, UK)
- 17.45

MOVING FROM SYSTEMIC TO CENTRAL NERVOUS SYSTEM INFLAMMATION: THE ROLE OF A20 IN THE NEUROPATHOLOGY OF MULTIPLE SCLEROSIS
Simona Perga (University of Torino, Torino, Italy)

- 18.00

ASTROCYTE CONTRIBUTION TO THE EXCESSIVE GLUTAMATE RELEASE IN THE SPINAL CORD OF THE SOD1G93A MOUSE MODEL OF AMYOTROPHIC LATERAL SCLEROSIS
Marco Milanese (University of Genova, Genova, Italy)

- 18.15

MICRORNA-146A HAS THERAPEUTIC EFFECTS IN SEIZURE AND EPILEPSY MODELS BY REDUCING THE IL-1R1/TLR4 SIGNALING ACTIVATION IN NEURONS AND GLIA
Valentina Iori (Mario Negri Institute, Milano, Italy)

- 18.30

A SINGLE POST-INSULT ADMINISTRATION OF EPIGENETIC DRUG COMBINATION IS NEUROPROTECTIVE IN A MOUSE MODEL OF PERMANENT MIDDLE CEREBRAL ARTERY OCCLUSION
Mariana Coelho da Mota (University of Brescia, Brescia, Italy)

- 18.45

PARKINSONIAN TOXIN-INDUCED OXIDATIVE STRESS INHIBITS BASAL AUTOPHAGY IN ASTROCYTES VIA NQO2/QUINONE OXIDOREDUCTASE 2: IMPLICATIONS FOR NEUROPROTECTION
Elzbieta Janda (Magna Grecia University, Catanzaro, Italy)

- 19.00

Discussion
- 19.30 - 21.00

Opening Reception

FRIDAY, DECEMBER 2

SESSION 2. MTN IN PAIN AND NERVE INJURY
Chairpersons: Sabatino Maione (Napoli) and Santina Chiechio (Catania)

- 08.30

DEFECTIVE GLUTAMATE AND K⁺ CLEARANCE BY CORTICAL ASTROCYTES IN FAMILIAL HEMIPLEGIC MIGRAINE TYPE 2
Daniela Pietrobon (University of Padova, Padova, Italy)

- 09.00

INVESTIGATING GLIAL CELL REACTION TO TRIGEMINAL PAIN AND MIGRAINE
Giulia Magni (University of Milano, Milano, Italy)

- 09.15

SUSCEPTIBILITY TO OXALIPLATIN PERIPHERAL NEUROPATHY IN MICE: INVOLVEMENT OF GENE EXPRESSION PROFILE?
Beatrice Riva (University of Piemonte Orientale, Novara, Italy)

- 09.30

Discussion

- 09.45

HONORARY LECTURE - Introduced by Alexei J. Verkhratski (Manchester)

NON-NEURONAL CELLS IN THE CNS CONTROL OF METABOLISM
Matthias H. Tschöp (Institute for Diabetes and Obesity, Helmholtz Zentrum München, and Technische Universität München, Germany)

- 10.35

Coffee break

SESSION 3. BRAIN DYSFUNCTION IN METABOLIC SYNDROME AND DIABETES
Chairpersons: Cesare Patrone (Stockholm) and Massimo Collino (Torino)

- 11.00

THE DIPEPTYDYL PEPTIDASE 4 INHIBITOR LINAGLIPTIN PARTIALLY REVERSES DIABETIC-INDUCED EFFECTS ON NEURONS AND AGE-INDUCED EFFECTS ON GLIAL CELLS IN THE MOUSE STRIATUM
Grazyna Lietzau (Karolinska Institute, Stockholm, Sweden)

- 11.15

SHORT TERM EFFECTS OF DIABETES ON NEUROACTIVE STEROIDS, CHOLESTEROL HOMEOSTASIS AND MITOCHONDRIA FUNCTIONALITY IN RAT BRAIN
Simone Romano (University of Milano, Milano, Italy)

- 11.30

DIETARY FRUCTOSE AS RISK FACTOR FOR NEURODEGENERATIVE DISEASES: A ROLE FOR ADVANCED GLYCATION END-PRODUCTS
Raffaella Mastricola (University of Torino, Torino, Italy)

- 11.45

Discussion

- 12.00

Lunch & poster visit

SESSION 4. MTN IN NEUROPSYCHIATRIC AND NEURODEVELOPMENTAL DISORDERS (PART 1)
Chairpersons: Giovanbattista Bonanno (Genova) and Pier Luigi Canonico (Novara)

- 13.50

PHARMACOLOGICAL TREATMENT OF DOWN SYNDROME
Renata Bartesaghi (University of Bologna, Bologna, Italy)

- 14.20

NEUROBIOLOGICAL LINKS BETWEEN DEPRESSION AND ALZHEIMER’S DISEASE: THE ROLE OF TGF-β1 SIGNALING PATHWAY
Filippo Caraci (University of Catania, Catania, Italy)

- 14.50

ASTROCYTE-DERIVED PROTEASES AS POTENTIAL CONTRIBUTORS TO ANTIDEPRESSANT EFFICACY
Katherine Conant (Georgetown University, Washington DC, USA)

- 15.20

Coffee break

- 15.40

HONORARY LECTURE - Introduced by Maria Angela Sortino (Catania)

NON NEURONAL TARGETS FOR PHARMACOLOGICAL THERAPY OF BRAIN DISORDERS
Ferdinando Nicoletti (Sapienza University, Roma, Italy)
This lecture has been made possible through an unrestricted grant from 

SESSION 4. MTN IN NEUROPSYCHIATRIC AND NEURODEVELOPMENTAL DISORDERS (PART 2)
Chairpersons: Giovanbattista Bonanno (Genova) and Pier Luigi Canonico (Novara)

- 16.30

FLUOXETINE COUNTERACTS THE OPPOSITE EFFECTS OF STRESS AND ENRICHMENT ON THE INFLAMMATORY RESPONSE AND MICROGLIAL STATUS
Silvia Alboni (University of Modena-Reggio Emilia, Modena, Italy)

- 16.45

IMPAIRED RESPONSE TO PHYSICAL EXERCISE-INDUCED BRAIN BENEFICIAL CHANGES IN BDNF VAL66MET MUTANT MICE IS ACCOMPANIED BY GENE EXPRESSION ALTERATIONS IN PERIPHERAL MUSCLES
Alessandro Ieraci (University of Milano, Milano, Italy)

- 17.00

CONTRIBUTION OF MICROGLIAL CELLS TO THE DEPRESSIVE/PSYCHOTIC-LIKE PHENOTYPE INDUCED BY ADOLESCENT DELTA-9-TETRAHYDROCANNABINOL TREATMENT IN FEMALE RATS
Erika Zamberletti (University of Insubria, Busto Arsizio, Italy)

- 17.15

METABOTROPIC GLUTAMATE RECEPTOR 5-MEDIATED ALTERATIONS OF HUMAN AND MOUSE NEURAL PROGENITOR DIFFERENTIATION IN THE ABSENCE OF FRAGILE X MENTAL RETARDATION PROTEIN
Majia Castren (University of Helsinki, Helsinki, Finland)

- 17.30

Discussion

- 18.00 - 20.45

Poster Session + wine & cheese reception

SATURDAY, DECEMBER 3

SESSION 5. NG2 CELLS & OLIGODENDROCYTES: RELEVANCE IN HEALTH, DISEASE AND THERAPY
Chairpersons: Agata Copani (Catania) and Maria Pia Abbracchio (Milano)

- 08.30

PROMOTING REMYELINATION VIA GPR17 RECEPTOR: A NEW APPROACH TO NEURODEGENERATIVE AND NEUROPSYCHIATRIC DISEASES
Maria Pia Abbracchio (University of Milano, Milano, Italy)

- 09.05

INHERENT HETEROGENEITY IN DORSAL AND VENTRAL OPCS OF THE MOUSE CNS UNVEILED BY CITRON-KINASE DELETION
Enrica Boda (University of Torino, Torino, Italy)

- 09.20

INVESTIGATING OLIGODENDROCYTE DYSFUNCTION IN DM1 BRAIN DISEASE
Sandra Braz (Imagine Institute, Paris, France)

- 09.35

SPECIFICITIES, SIMILARITIES AND SYNERGIES OF DIMETHYL FUMARATE AND PIOGLITAZONE-INDUCED EFFECTS ON MITOCHONDRIA, ROS PROTECTION AND DIFFERENTIATION IN OLIGODENDROCYTE PROGENITORS
Chiara De Nuccio (Istituto Superiore di Sanità, Roma, Italy)

- 09.50

MICROGLIA-DERIVED EXTRACELLULAR VESICLES REGULATE PROLIFERATION AND DIFFERENTIATION OF OLIGODENDROCYTE PRECURSOR CELLS
Roberta Parolisi (University of Torino, Torino, Italy)

- 10.05

Discussion

- 10.20

Coffee break

- 10.45

CLOSING HONORARY LECTURE - Introduced by Nicoletta Brunello (Modena)

THE NEUROVASCULAR UNIT, BLOOD-BRAIN BARRIER, AND BLOOD-BRAIN INTERFACE IN DRUG DELIVERY TO THE BRAIN: AN ENDOCENTRIC VIEW
William A. Banks (University of Washington, Seattle, WA, USA)
This lecture has been made possible through an unrestricted grant from 

SESSION 6. NEURONAL AND NON NEURONAL CELL CROSS-TALK IN HEALTH AND DISEASES
Chairpersons: Michela Matteoli (Milano) and Marina Pizzi (Brescia)

- 11.35

KCA3.1 CHANNEL INHIBITION SENSITIZES MALIGNANT GLIOMAS TO TEMOZOLOMIDE TREATMENT
Giuseppina D'Alessandro (Sapienza University, Roma, Italy)

- 11.50

TUMOR IMMUNOESCAPE DURING GLIOMA PROGRESSION
Irene Appolloni (University of Genova, Genova, Italy)

- 12.05

MICROGLIA TRPV1 CHANNELS ARE BRAIN INFLAMMATORY DETECTORS IN THE MOUSE CORTEX
Annunziato Morabito (EBRI, Roma, Italy)

- 12.20

NOVEL INSIGHTS INTO ASTROCYTE-MEDIATED FATE SPECIFICATION OF ADULT NEURAL PROGENITOR CELLS
Valeria Bortolotto (University of Piemonte Orientale, Novara, Italy)

- 12.35

HIGH-DIMENSIONAL MASS CYTOMETRY CHARACTERIZATION OF THE BRAIN’S IMMUNE POPULATIONS
Ben Korin (Israel Institute of Technology, Haifa, Israel)

- 12.50

Discussion

- 13.00

Lunch

SESSION 7. NEURAL STEM CELLS, NEURO-GLIA-VASCULAR INTERACTIONS, BLOOD BRAIN BARRIER AND GUT-BRAIN AXIS
Chairpersons: William A. Banks (Seattle), Mariagrazia Grilli (Novara)

- 14.30

MENINGES: FROM PROTECTIVE MEMBRANES TO STEM CELL NICHE
Ilaria Decimo (University of Verona, Verona, Italy)

- 15.00

VASCULAR INFLAMMATION AND NEUTROPHIL TRAFFICKING IN ALZHEIMER’S DISEASE
Elena Zenaro (University of Verona, Verona, Italy)

- 15.30

THE INTERPLAY BETWEEN ENDOTHELIAL CELLS AND ASTROCYTES IS CRITICAL FOR THE ENHANCED SENSITIVITY OF THE BLOOD BRAIN BARRIER TO BETA AMYLOID
Simona Spampinato (University of Catania, Catania, Italy)

- 15.45

LACTOBACILLUS CASEI DG RESTORES DYSBIOSIS-INDUCED GUT INFLAMMATION, DEPRESSIVE BEHAVIOUR AND RECOGNITION MEMORY DEFICIT ASSOCIATED WITH PHYSIOLOGICAL ALTERATIONS IN THE HIPPOCAMPUS
Francesca Guida (University of Napoli, Napoli, Italy)

- 16.00

Discussion

- 16.20 - 17.00

Concluding remarks

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