SINS

# National Congress of the ITALIAN NEUROSCIENCE SOCIETY

**October 1-4, 2017**

**Lacco Ameno, Ischia Island - Naples, Italy**

## Sunday, October 1, 2017

**09:00** **Opening Cerimony: Auditorium Rizzoli**

## Symposium 1 (ECM): Auditorium Rizzoli

**09:30-11:10** **Neurobiological and epigenetic bases of alcohol dependence**
Chairman: **G. Di Chiara**

**09:30** Transgenerational inheritance of drug abuse
**Carla Cannizzaro** *(Dept. of Sciences for Health Promotion and Mother and Child Care, University of Palermo)*

**09:55** The synaptic triad of the nucleus accumbens in alcohol dependence
**Marco Diana** *(University of Sassari)*

**10:20** Role of nociceptin in ethanol reinforcing actions
**Nazzareno Cannella** *(University of Camerino)*

**10:45** Changes in dopamine transmission in the nucleus accumbens shell and core during ethanol and sucrose self-administration
**Gaetano Di Chiara** *(University of Cagliari)*

## Symposium 2: Sala Pinetina

**09:30-11:10** **Brain disorders: enhancing endogenous repair in the central nervous system**
Chairman: **E. Coppi**

**09:30** Local dysregulation of the GPR17 receptor in neuroinflammatory
**Davide Lecca** *(University of Milano)*

**09:55** D-Aspartate treatment stimulates differentiation of oligodendrocyte precursors, prevents demyelination and accelerates remyelination in the cuprizone mouse model of Multiple Sclerosis
**Valeria de Rosa** *(Div. of Pharmacology, Dept. of Neuroscience, "Federico II" University of Napoli)*

**10:20** Purinergic signalling modulates in vitro ischemic damage and oligodendrocyte progenitor cell differentiation
**Elisabetta Coppi** *(University of Firenze)*

**10:45** Improved bioenergetics by dexpramipexole protects from ischemic brain injury
**Mirko Muzzi** *(University of Firenze)*

## Symposium 3: Sala Azzurra

**09:30-11:10 Autophagy and phagocytosis in brain pathophysiology**
Chairman: **E. Janda**

**09:30** Autophagy upstream regulation in the developmental pathophysiology of the nervous system
**Francesco Cecconi** *(Danish Cancer Society Research Center, Copenhagen, Denmark)*

**09:55** Modulation of autophagy to counteract pathological brain ageing
**Mickael Decressac** *(TIGEM, Napoli)*

**10:20** Defective autophagy in Parkinson's disease: role of dopaminergic toxins
**Elzbieta Janda** *(Magna Graecia University, Catanzaro)*

**10:45** Targeting microglia phagocytosis and inflammation in Parkinson's disease
**Anna R. Carta** *(University of Cagliari)*

## Symposium 4: Sala Agrumi

**09:30-11:10 Stress: epigenetics- synaptic changes- and pathophysiology**
Chairman: **L. Musazzi**

**09:30** Identification of a long lasting early in life stress signature associated with enhanced vulnerability for depression by using 'omics' and cross species approaches both in animals and in humans
**Annamaria Cattaneo** *(Biological Psychiatry Unit IRCCS Centro San Giovanni di Dio Fatebenefratelli Hospital, Brescia)*

**09:55** How the environment shapes our behavior: role of LSD1 and SRF in adaptation and vulnerability
**Francesco Rusconi** *(Dept. of Medical Biotechnology and Translational Medicine, University of Milano)*

**10:20** Functional/morphological changes and modulation of microRNAs in the chronic mild stress model of depression: the action of ketamine
**Laura Musazzi** *(Laboratory of Neuropsychopharmacology and Functional Neurogenomics, Dept. of Pharmacological and Biomolecular Sciences, University of Milano)*

**10:45** Role of the satiety signal oleoylethanolamide in frustration stress-induced bingelike palatable food consumption in female rats with a history of food restriction
**Adele Romano** *(Dept. Physiology and Pharmacology "Vittorio Erspamer", "La Sapienza" University of Roma)*

**11:10-11:30 COFFEE BREAK**

**11:30-12:15** **Plenary Lecture (ECM): Auditorium Rizzoli**
**Y. Gotoh,** *University of Tokyo, Japan*
**Molecular basis of brain development**
Chairman: **G. Racagni**

**12:15-13:45** **Poster Session (ECM) and Lunch: Villa Arbusto, Piazza Santa Restituta**

## Symposium 5: Auditorium Rizzoli

**14:00-15:15** **From tractography and functional magnetic resonance to connectome**
Chairman: **G. Tedeschi**

**14:00** Resting state fMRI
**Alessandro Tessitore** *(Dept. of Neurology, University of Campania "L. Vanvitelli", Napoli)*

**14:25** The structural and functional connectome of the diseased brain
**Federica Agosta** *(Vita-Salute San Raffaele University, Milano)*

**14:50** Behind the scenes of human connectome: The role of brain oscillations in normal and modified functional connectivity
**Fabrizio Esposito** *(University of Salerno)*

## Symposium 6: Sala Pinetina

**14:00-15:40** **Immune cells influencing the central nervous system from development to aging and diseases**
Chairmen: **S. Fumagalli - C. Spalletti**

**14:00** Novel mechanisms in CNS vascularisation
**Alessandro Fantin** *(University College London, UK)*

**14:25** The neuron-astrocyte-microglia triad in models of neurodegeneration
**Daniele Lana** (University of Firenze)

**14:50** Lymphocyte bioenergetics in ischemic stroke patients during aging
**Federica Ferrari** *(University of Pavia)*

**15:15** Macrophages are key drivers of post-ischemic responses
**Stefano Fumagalli** *(IRCCS - "Mario Negri" Pharmacological Research Institute, Milano)*

## Symposium 7: Sala Azzurra (ECM)

**14:00-15:40 Joint Symposium SINS – SIN**
Chairmen: **F. Conti – L. Proviniciali**

**14:00** Animal models of neurodegenerative diseases, the role of the dopaminergic system
**Nicola Mercuri** *("Tor Vergata" University of Roma)*

**14:25** The serotonergic system in L-DOPA-induced dyskinesia: from animal models to clinical investigation
**Manolo Carta** *(University of Cagliari)*

**14:50** PINK1: a key protein at the crossroad of multiple neuroprotective pathways
**Enza Maria Valente** *(University of Pavia)*

**15:15** Deep brain stimulation in Parkinson disease: from brain circuits to clinical efficacy
**Maurizio Zibetti** *(University of Torino)*

## Symposium 8: Sala Agrumi

**14:00-15:40 Action representation and social prediction in the monkey frontal cortex**
Chairmen: **A. Genovesio - S. Rozzi**

**14:00** Oxytocin differentially couples the anterior cingulate cortex and amygdala for prosocial and antisocial decisions
**Olga Dal Monte** *(Dept. of Neuroscience, Yale University, New Haven CT, USA)*

**14:25** Coding of simple and complex goal-directed action sequences in the ventrolateral prefrontal cortex
**Stefania Bruni** (Baylor College of Medicine Houston, TX, US)

**14:50** The role of macaque medial frontal cortex in the prediction of others' choices
**Aldo Genovesio** *(Dept. of Physiology and Pharmacology, "La Sapienza" University of Roma)*

**15:15** Neural coding of action observation in the monkey ventrolateral prefrontal cortex
**Stefano Rozzi** *(Dept. of Neuroscience, University of Parma)*

## Symposium 9 (ECM): Auditorium Rizzoli

**15:45-17:25 Emerging genes underlying neuronal dysfunction in Parkinson's disease**
Chairmen: **G. Costa - N. Simola**

**15:45** Decreased Rhes mRNA levels in the brain of patients with Parkinson's disease and MPTP-treated macaques
**Francesco Napolitano** *("Federico II" University of Napoli)*

**16:10** Lack of Rhes protein increases dopamine neurons degeneration and neuroinflammation in a gender dependent manner
**Giulia Costa** *(University of Cagliari)*

**16:35** Genetic experimental models of Parkinson's disease: role of striatal cholinergic dysfunction in a Rhes knockout mouse model
**Giuseppe Sciamanna** *("Tor Vergata" University of Roma)*

**17:00** C-Rel deficit in Parkinson's disease
**Vanessa Porrini** *(University of Brescia)*

## Symposium 10: Sala Pinetina

**15:45-17:00 Novel approaches for the therapy of ischemic brain**
Chairmen: **S. Beretta - F. Orzi**

**15:45** Cerebral collateral flow modulation in acute ischemic stroke: evidence from translational research.
**Simone Beretta** *(San Gerardo Hospital, ASST, Monza)*

**16:10** Neuroinflammatory targets in ischemic injury
**Maria Grazia De Simoni** *(IRCCS - "Mario Negri" Pharmacological Research Institute, Milano)*

**16:35** MicroRNA as key modulators of neurobeneficial effects evoked by remote limb ischemic postconditioning in the brain
**Vinciguerra Antonio** *(Div. of Pharmacology, Dept. of Neuroscience, "Federico II" University of Napoli)*

## Symposium 11: Sala Azzurra

**15:45-17:25 New advances on NMDA receptor modulation and signaling pathways: from synaptic plasticity to brain disorders**
Chairmen: **F. Gardoni - A. Pittaluga**

**15:45** Immune-pharmacological characterization of presynaptic release-regulating NMDA receptors in CNS: new insight into the comprehension of the molecular events accounting for autoimmune encephalitis
**Anna Pittaluga** *(Dept. of Pharmacy, DIFAR, University of Genova)*

**16:10** The c-Jun N-Terminal Kinase: localization and function in the pre-synaptic terminal
**Tiziana Borsello** *(Dept. of Neuroscience, IRCCS - "Mario Negri" Pharmacological Research Institute, Milano)*

**16:35** D-Aspartate oxidase counteracts precocius brain deterioration during aging by preventing NMDAR-related neurotoxicity
**Alessandro Usiello** *(Dept. of Environmental, Biological and Pharmaceutical Sciences and Technologies, University of Campania "L. Vanvitelli", Caserta)*

**17:00** The glutamatergic synapse: a chatroom for Amyloid β-peptide and the nucleus
**Elena Marcello** *(DiSFeB, University of Milano)*

## Symposium 12: Sala Agrumi

**15:45-17:25 Excess memory and excess forgetting: two tails of the same coin?**
Chairmen: **S. Macrì - P. Campolongo**

**15:45** Selective enhancement of memory access in individuals with highly superior autobiographical memory: An fMRI study
**Valerio Santangelo** *(University of Perugia)*

**16:10** The endocannabinoid system as a potential target for memory consolidation enhancement
**Patrizia Campolongo** *("La Sapienza" University of Roma)*

**16:35** Quantitative MRI investigations of patients with mild to severe cognitive impairments
**Barbara Spanò** *(IRCCS Santa Lucia Foundation, Roma)*

**17:00** Neuroactive steroids and neurodegeneration in Alzheimer's disease
**Silvia Giatti** *(University of Milano)*

| | |
|---|---|
| **17:30-18:15** | **Plenary Lecture (ECM): Auditorium Rizzoli**<br>**F. Benedetti,** *University of Torino, Italy*<br>**The placebo effect: a melting pot of concepts and ideas for neuroscience**<br>Chairman: **G. Gessa** |

| | |
|---|---|
| **18:30** | **Welcome Reception** |

SINS

# National Congress of the ITALIAN NEUROSCIENCE SOCIETY

October 1-4, 2017

Lacco Ameno, Ischia Island - Naples, Italy

## Monday, October 2, 2017

### Symposium 13 (ECM): Auditorium Rizzoli

**08:30-10:10 Novel molecular, pathophysiologic and therapeutic aspects of cephalagia**

Chairman: **G. Tedeschi**

**08:30** Mechanisms of migraine and medication overuse headache
**Paolo Calabresi** *(University of Perugia)*

**08:55** Calcitonin gene-related peptide pathway: a new target in migraine treatment
**Pierangelo Geppetti** *(University of Firenze)*

**09:20** Sensitization and habituation: two contrasting phenomenona in migraine brain?
**Gianluca Coppola** *("G.B.Bietti"-IRCCS Foundation, Roma)*

**09:45** Pathophysiological mechanisms of trigeminal neuralgia
**Giulia Di Stefano** *("La Sapienza" University of Roma)*

### Symposium 14: Sala Pinetina

**08:30-10:10 Modulating synaptic function in health and disease: focus on novel players and cellular mechanisms**

Chairman: **G. Fattorini**

**08:30** Synaptic vesicles proteins: a way to the targeted-medicine
**Giorgia Fattorini** *(Polytechnic University of Marche, Ancona)*

**08:55** Cell-type and subunit specific alterations of NMDA receptors in levodopa-induced dyskinesias: from molecular pathogenesis to identification of new pharmacological targets
**Manuela Mellone** *(University of Milano)*

**09:20** APP as a trojan horse for Aβ and Tau oligomers to affect synaptic plasticity and memory
**Walter Gulisano** *(University of Catania)*

**09:45** Cytokine-dependent modulation of synapses: linking the immune and nervous system in health and disease
**Silvia Rossi** *(IRCCS Foundation Neurological Institute "C. Besta", Milano)*

## Symposium 15: Sala Azzurra

**08:30-10:10** **Of mice and men: murine models and human brain organoids for the mechanistic dissection of neurodevelopmental disorders**
Chairman: **G. Testa**

**08:30** Acetaminophen rescues microglial defects and cognitive impairment in the DP16 murine model of Down syndrome
**Laura Cancedda** *(Italian Institute of Technology (IIT) and Dulbecco Telethon Institute, Genova)*

**08:55** In vitro modelling of human neocortical development using pluripotent stem cells
**Luciano Conti** *(Centre for Integrative Biology – CIBIO, University of Trento)*

**09:20** The vulnerability of the developing human cortex to genetic and environmental causes of chromatin dysfunction: insights from patterned brain organoids
**Giuseppe Testa** *(Molecular Biology-University of Milano, Laboratory of Stem Cell Epigenetics-European Institute of Oncology, Milano)*

**09:45** The role of branched chain amino acids in brain development and neurodevelopmental disorders
**Gaia Novarino** *(Institute of Science and Technology Austria, Klosterneuburg, Austria)*

## Symposium 16: Sala Agrumi

**08:30-10:10** **Rodent models of emotional and social behavior as tools to investigate neurological and psychiatric diseases: focus on ultrasonic vocalizations**
Chairman: **N. Simola**

**08:30** Fifty kHz ultrasonic vocalizations in rats: behavioral significance and mechanisms
**Nicola Simola** *(Dept. of Biomedical Sciences, University of Cagliari)*

**08:55** Neurochemical correlates of "50-kHz" ultrasonic vocalizations in reward anticipation, reward processing and appetitive social interactions
**Adam Hamed** *(Laboratory of Spatial Memory, Department of Cellular and Molecular Biology, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland)*

**09:20** Ultrasonic vocalization as a marker of social cognition in mice models
**Sylvie Granon** *(Paris-Saclay Institute of Neuroscience, UMR CNRS 9197, Orsay, France)*

**09:45** Novel pharmacological tools to treat social dysfunctions in autism spectrum disorders: insights from rodent studies
**Viviana Trezza** *(Dept. of Science, Section of Biomedical Sciences and Technologies, Roma Tre University, Roma)*

**10:15-10:45 COFFEE BREAK**

**10:45-11:30** **Plenary Lecture (ECM): Auditorium Rizzoli**
**Z. Kokaia,** *Lund University, Sweden*
**Stem cells and reprogramming for reconstruction of stroke-damaged neuronal network**
Chairman: **L. Annunziato**

**11:30-13:15** **Poster Session (ECM): Villa Arbusto, Piazza Santa Restituta**

## Symposium 17 (ECM): Auditorium Rizzoli

**13:30-15.10** **New disease modifying therapies and emerging targets for neuroprotection and repair in Multiple Sclerosis**
Chairman: **F. Boscia**

**13:30** Acidotoxicity and acid-sensing ion channels in Multiple Sclerosis
**Luca Muzio** *(San Raffaele Scientific Institute, Milano)*

**13:55** Targeting IDO1 enzyme for controlling neuroinflammation in multiple sclerosis
**Ciriana Orabona** *(Dept. Experimental Medicine, Sect. Pharmacology, University of Perugia)*

**14:20** Emerging role of the sodium calcium exchanger NCX3 in oligodendrocytes during CNS demyelination and remyelination
**Francesca Boscia** *(Div. Pharmacology, Dept. Neuroscience, "Federico II" University of Napoli)*

**14:45** Anti B-cell therapies in relapsing and primary progressive Multiple Sclerosis
**Antonio Gallo** *(Dept. of Neurology and Pathophysiology, University of Campania "L. Vanvitelli", Napoli)*

## Symposium 18: Sala Pinetina

**13:30-15:10** **Generation of hMSNs for transplantation in HD**
Chairman: **A. Vercelli**

**13:30** Harnessing CRISPR/Cas9 technology to generate stem cell-based model of Huntington disease
**Dario Besusso** *(INGM and University of Milano)*

**13:55** In search for functional markers of neurological disease using patient derived induced plutipotent stem cell
**Gerardo Biella** *(University of Pavia)*

**14:20** PET molecular imaging in brain inflammation and plasticity
**Rosa Maria Moresco** *(Milano Bicocca University, Milano)*

**14:45** Integration and behavioral outcomes of hMSN progenitors in the striatum of a model of HD

**Alessandro Vercelli** *("Cavalieri Ottolenghi" Neuroscience Institute, Orbassano, Torino, University of Torino)*

## Symposium 19: Sala Azzurra

**13:30-15:10 Environmental and genetic factors and their interaction: how they affect behavioral and neurochemical responses to rewarding and aversive stimuli**
Chairman: **S. Scheggi**

**13:30** Fluoxetine effect on inflammatory markers and microglia status depends by the quality of the living environment
**Laura Maggi** *("La Sapienza" University, Roma)*

**13:55** Chronic mild stress and synaptic mechanisms: from anhedonia to cognitive impairment
**Marco Andrea Riva** *(University of Milano)*

**14:20** Early postnatal environment affects response to aversive and rewarding stimuli in adult mice in a genotype-dependent manner: interplay between genetic makeup, early environment and later experience
**Rossella Ventura** *(Dept. of Psychology and Center "Daniel Bovet", "La Sapienza" University of Roma and IRCCS Santa Lucia Foundation, Roma)*

**14:45** Antidepressant efficacy of lamotrigine and aripiprazole in a model of stress-induced motivational anhedonia in rats
**Simona Scheggi** *(Dept. of molecular and developmental medicine, University of Siena)*

## Symposium 20: Sala Agrumi

**13:30-15:10 New therapeutic targets in autism spectrum disorders from studies on animal models**
Chairmen: **S.A. Bonini - M. Grilli**

**13:30** Maternal immune activation and abnormal brain development: new insights on Autism Spectrum Disorders pathogenesis and treatment
**Sara Anna Bonini** *(University of Brescia)*

**13:55** Unweaving the spectrum: converging connectivity alterations in mouse models of syndromic autism
**Alessandro Gozzi** *(Italian Institute of Technology, Trento)*

**14:20** Identification of convergent and conserved ASD-related transcriptional signatures in two mouse models of autism
**Giovanni Provenzano** *(University of Trento)*

**14:45** The role of BKCa channel as a pharmacological target in autism spectrum disorders: evidence from the Fmr1-KO mouse model of Fragile X syndrome
**Susanna Pietropaolo** *(Bordeaux University, INCIA, France)*

## Symposium 21: Auditorium Rizzoli

**15:20-17:00 Alzheimer's disease: from spreading pathology to biological therapies**
Chairman: **F. Tagliavini - G. Tedeschi**

**15:20** Pathologic heterogeneity of Alzheimer's disease
**Stefano Cappa** *(Vita-Salute San Raffaele University, Milano)*

**15:45** Tau and amyloid updates
**Fabrizio Tagliavini** *(IRCCS Foundation "C. Besta" Neurological Institute, Milano)*

**16:10** Amyloid and neuroinflammation
**Lucio Tremolizzo** *(Milano Bicocca University,Milano)*

**16:35** Treating Alzheimer's disease by targeting ß-Amyloid: Where do we stand?
**Alessandro Padovani** *(University of Brescia)*

## Symposium 22: Sala Pinetina

**15:20-17:00 The many faces of a vulnerable brain: the role of adolescence**
Chairman: **L. Caffino**

**15:20** Measuring motivation and performance of social play behaviour in rats
**Marijke Achterberg** *(Faculty of Veterinary Medicine, Utrecht University, Netherland)*

**15:45** Amplification of mGlu5-endocannabinoid signalling rescues behavioral and synaptic deficits induced by a dietary polyunsaturated fatty acids imbalance starting at adolescence
**Antonia Manduca** *(INSERM U901 - INMED - Université de Aix-Marseille, France)*

**16:10** Acute exposure to cocaine during brain development evokes behaviors and molecular changes reminiscent of a negative emotional state
**Lucia Caffino** *(University of Milano)*

**16:35** Endocannabinoid system and brain maturation: why cannabis imprints its mark into the adolescent brain?
**Pamela Prini** *(University of Insubria)*

## Symposium 23: Sala Azzurra

**15:20-17:00 Identification of neuroprotective molecules for Spinal Muscular Atrophy**
Chairmen: **E. Di Schiavi - M. Nizzardo**

**15:20** Molecular and gene therapy for SMA
**Monica Nizzardo** *(IRCCS Foundation, "Cà Granda" Policlinico, University of Milano)*

**15:40** Self-eating and self-killing: alternative or cooperating pathways in SMA?
**Marina Maria Boido** *("Cavalieri Ottolenghi" Neuroscience Institute, Orbassano, Torino, University of Torino)*

**16:00** Axon outgrowth and neuronal differentiation defects after a-SMN and FL-SMN silencing in primary hippocampal cultures
**Cinzia Cagnoli** *(IRCCS Foundation "C. Besta" Neurological Institute, Milano)*

**16:20** Identification of neuroprotective molecules using a C.elegans model of SMA
**Pamela Santonicola** *(Institute of Biosciences and BioResources, IBBR, CNR, Napoli)*

**16:40** MiRNA-206 modulation and NCX2 expression in brain stem in a mouse model of Spinal Muscular Atrophy
**Valeria Valsecchi** *(Div. of Pharmacology, Dept. of Neuroscience, Federico II University of Napoli)*

## Symposium 24: Sala Agrumi

**15:20-17:00 Retinal physiology and disease: novel therapeutic approaches**
Chairmen: **J.F. Maya-Vetencourt - S. Di Marco**

**15:20** A fully organic retinal prosthesis restores vision in a rat model of degenerative blindness
**Jose Fernando Maya-Vetencourt** *(University of Genova)*

**15:45** Photoreceptors malfunctioning and consequences on the inner retina processing
**Stefano Di Marco** *(University of L'Aquila)*

**16:10** Visual BOLD response in late-blind subjects with Argus II retinal prosthesis
**Elisa Castaldi** *(University of Pisa)*

**16:35** Pharmacological treatment of retinitis pigmentosa: a mutation-independent approach
**Ilaria Piano** *(University of Pisa)*

**17:00-17:45 Plenary Lecture: Auditorium Rizzoli**
**E. Cherubini**, *International School for Advanced Studies, Trieste*
**GABA in brain development: a 30 years journey**
Chairman: **M. Taglialatela**

# Tuesday, October 3, 2017

## Symposium 25: Auditorium Rizzoli

**08:30-10:10** **Targeting inflammation in synaptopathies**
Chairmen: **M. Matteoli - D. Centonze**

**08:30** The role of the pro-inflammatory cytokines in synaptogenesis and spine morphogenesis
**Davide Pozzi** *(Humanitas University HUNIMED, Milano)*

**08:55** Synapsin I is a central mediator of the neuronal response to inflammation
**Fabrizia Guarnieri** *(San Raffaele Hospital, Milano)*

**09:20** miR-142-3p is a key regulator of IL-1β-dependent synaptopathy in neuroinflammation
**Georgia Mandolesi** *(IRCCS Santa Lucia Foundation, Roma)*

**09:45** Role of inflammation in the neurodegenerative damage of the grey matter in patients with multiple sclerosis
**Massimiliano Calabrese** *(University of Verona)*

## Symposium 26 (ECM): Sala Pinetina

**08:30-09:45** **Immune cells and molecules as targets for neuroprotection**
Chairman: **G. Cantarella**

**08:30** Improvement of the peripheral immune response restrains inflammatory processes in the brain of 3XTG-ad mice
**Giuseppina Cantarella** *(Biometec, University of Catania)*

**08:55** GITR-dependent expansion of GITR single positive (CD4+GITR+CD25low/-FOXP3low) regulatory T cells and their potential role in the protection from neurodegeneration: preliminary evidence
**Giuseppe Nocentini** *(University of Perugia)*

**09:20** The expression and activity of KV3.4 channel subunits are precociously upregulated in astrocytes exposed to Aβ oligomers and in astrocytes of Alzheimer's disease Tg2576 mice
**Anna Pannaccione** *(Div. of Pharmacology, Dept. of Neuroscience, "Federico II" University of Napoli)*

## Symposium 27: Sala Azzurra

**08:30-10:10** **Alpha-synuclein and Lrrk2: two major culprits in Parkinson's disease**
Chairmen: **A. Tozzi - F. Stocchi**

**08:30** Dopamine D2 receptor-mediated neuroprotection in a LRRK2 genetic model of Parkinson's disease
**Alessandro Tozzi** *(Dept. of Experimental Medicine, Section of Physiology and Biochemistry, University of Perugia)*

**08:50** Age-dependent dopamine transporter dysfunction and Serine129 phospho-α-synuclein overload in G2019S LRRK2 mice
**Michele Morari** *(Dept. of Medical Sciences, Section of Pharmacology, and National Institute of Neuroscience, University of Ferrara)*

**09:10** Striatal synaptic plasticity alterations in early and late phases of parkinsonism in alpha-synuclein overexpressing mice
**Barbara Picconi** *(Laboratory of Neurophysiology, Santa Lucia Fundation, Roma)*

**09:30** Does immunotherapy have a future in Parkinson's disease?
**Fabrizio Stocchi** *(La Pisana San Raffaele Hospital, Roma)*

**09:50** Incremental learning protocol unmasks altered synaptic plasticity in striatal neurons from alpha-synuclein overexpressing mice
**Elvira De Leonibus** *(Institute of Genetics and Biophysics, IGB, CNR, Napoli - Telethon Institute of Genetics and Medicine (TIGEM) Pozzuoli, Napoli)*

## Symposium 28: Sala Agrumi

**08:30-09:45** **The green neuroscience: new insights from the application of natural remedies to the investigations on disorders of the nervous system**
Chairman: **E. Acquas**

**08:30** Drosophila melanogaster as a model to discover novel targets against neurological diseases using natural extracts
**Elio Acquas** *(University of Cagliari)*

**08:55** Neuroprotective effects of polyphenols via antioxidant and anti-inflammatory activities.
**Maria Daglia** *(University of Pavia)*

**09:20** New insights on the effects of Withania somnifera on the motivational properties of addictive drugs
**Valentina Bassareo** *(University of Cagliari)*

**10:15-10:45** **COFFEE BREAK**

**10:45-11:30** **Plenary Lecture (ECM): Auditorium Rizzoli**
**A. Ballabio,** *Tigem and Federico II University of Napoli*
**Lysosomal storage disorders and neurodegenerative diseases**
Chairman: **L. Annunziato**

**11:30-13:15 Poster Session (ECM) and Lunch: Villa Arbusto, Piazza Santa Restituta**

## Workshop (ECM): Auditorium Rizzoli

**13:30-14:15 Rules and procedures for animal experiments in biomedical research: questions and answers**
Chairman: **P. Popoli**
**Rodolfo Lorenzini** *(ISS - Istituto Superiore di Sanità, Roma)*
**Rosa Potenza** *(ISS - Istituto Superiore di Sanità, Roma)*

## Symposium 29: Auditorium Rizzoli

**14:20-16:00 Glucocerebrosidase in Parkinson's disease: insights into pathogenesis and prospects for treatment**
Chairmen: **F. Blandini - N.B. Mercuri**

**14:20** Understanding the relationship between glucocerebrosidase deficiency and Parkinson's disease: experimental evidence
**Fabio Blandini** *("C. Mondino" National Neurological Institute, Pavia)*

**14:45** Gaucher-related misfolded neurodegenerative proteinopathies
**Josè Lanciego** *(Universidad de Navarra, Spain)*

**15:10** The association between GBA1 mutation and Parkinson's disease: a clinical perspective
**Roberto Cilia** *(Parkinson Institute, ASST "Gaetano Pini-CTO", Milano)*

**15:35** Targeting glucocerebrosidase for disease-modifying treatments in Parkinson's disease
**Stephen Mullin** *(Dept. of Clinical Neurosciences, Institute of Neurology, UCL, London, UK)*

## Symposium 30: Sala Pinetina

**14:20-16:00 Advances in understanding the neural basis of motor decision: from spontaneous ritmicity to stimulation effects**
Chairmen: **E. Brunamonti - P. Pani**

**14:20** Bridging spontaneous and task related dynamics in cortical networks
**Maurizio Mattia** *(ISS, Istituto Superiore di Sanità, Roma)*

**14:45** Neural basis of whether and when to move in dorsal premotor cortex
**Pierpaolo Pani** *("La Sapienza" University of Roma)*

**15:10** Cerebellar stimulation in modulating motor control and motor learning.
**Giacomo Koch** *(S. Lucia Foundation, IRCCS, Roma)*

**15:35** The effect of transcranial magnetic stimulation on single-cell activity in alert macaque monkeys
**Maria C. Romero** *(Lab. voor Neuro- en Psychofysiologie, KU Leuven, Belgium)*

## Symposium 31: Sala Azzurra

**14:20-16:00** **From plasmamembrane to organelles: new targets to relieve $Ca^{2+}$ dysregulation in neurodegeneration**
Chairman: **A. Secondo**

**14:20** Modulation of endoplasmic reticulum $Ca^{2+}$ refilling mediated by ORAI1, STIM1 and NCX isoforms as a new therapeutical strategy in neurodegeneration
**Agnese Secondo** *(Div. of Pharmacology, Dept. of Neuroscience, "Federico II" University of Napoli)*

**14:45** Ryanodine receptor 2-mediated synaptic remodelling in cognitive functions
**Lena Wischhof** *(German Center for Neurodegenerative Diseases (DZNE), Bonn, Germany)*

**15:10** P2X7-mediated intracellular $Ca^{2+}$ derangement as the pathogenetic mechanism underlying demyelination in the hereditary neuropathy Charcot-Marie-Tooth 1A
**Santina Bruzzone** *(DIFAR, Biochemistry section, University of Genova)*

**15:35** Involvement of TG2 in calcium homeostasis in rat primary hippocampal neurons
**Claudia Verderio** *(CNR Neuroscience Institute, Milano)*

## Symposium 32: Sala Agrumi

**14:20-16:00** **Molecular mechanisms of epileptogenesis: insights from mammalian and non-mammalian animal models**
Chairmen: **E. Del Giudice**

**14:20** Potassium channels: genetics and pharmacology of early-onset epileptic encephalopathies
**Maria Virginia Soldovieri** *(University of Molise, Campobasso)*

**14:45** Targeting oxidative stress improves disease outcomes in a rat model of acquired epilepsy
**Gaetano Terrone** *("Federico II" University of Napoli)*

**15:10** Evolutionary conserved ARX-regulatory pathway in mammals and nematode to find a convergent druggable pathway damaged in neurodevelopmental disorders
**Maria Giuseppina Miano** *(CNR-IGB, Napoli)*

**15:35** The neuroinflammatory response following acute seizures during zebrafish brain development and in chordate evolution
**Paolo Sordino** *(Anton Dohrn Zoological Station, Napoli)*

| | |
|---|---|
| **16:00-16:45** | **Plenary Lecture: Auditorium Rizzoli**<br>**J. Cryan,** *University College Cork, Ireland*<br>**A 'gut feeling' about the brain: role of microbiome in neurodevelopment, stress and behaviour**<br>Chairman: **M. Popoli** |
| **17:00-19:00** | **General Assembly: Auditorium Rizzoli** |
| **20:00** | **Social Dinner** |

## Wednesdy, October 4, 2017

**08:30-09:15** **Plenary Lecture: Auditorium Rizzoli**
**D. Pietrobon,** *University of Padova*
**Altered brain excitatory-inhibitory balance in mouse models of migraine**
Chairman: **M. Morelli**

## Symposium 33 (ECM): Auditorium Rizzoli

**09:20-11:00** **Cellular, molecular and translational aspects in motor neuron diseases**
Chairmen: **M. Milanese - L. Ferraiuolo**

**09:20** Glial cells as a tool for personalised medicine in Amyotrophic Lateral Sclerosis
**Laura Ferraiuolo** *(Sheffield Institute of Translational Neuroscience (SITraN), University of Sheffield, UK)*

**09:45** Altered mechanisms underlying the abnormal glutamate release in Amyotrophic Lateral Sclerosis at a pre-symptomatic stage of the disease
**Tiziana Bonifacino** *(Dept. of Pharmacy (DIFAR), Pharmacology and Toxicology Unit, University of Genova)*

**10:10** Clearance of misfolded proteins in motoneuron disease: the case of Spinal and Bulbar Muscular Atrophy
**Paola Rusmini** *(Dept. of Pharmacological and Biomolecular Sciences and Centre of Excellence on Neurodegenerative Diseases, University of Milano)*

**10:35** Exosomes: A novel therapeutic approach for ALS?
**Roberta Bonafede** *(Dept. of Neurological, Biomedical and Movement Sciences, University of Verona)*

## Symposium 34: Sala Pinetina

**09:20-11:00** **Shaping glutamatergic transmission by intrinsic mechanisms and cross-talking neurotransmitters: from synaptic function to synaptic dysfunction**
Chairman: **D. Puzzo**

**09:20** GABAergic signalling to astrocytes favors excitatory neurotransmission
**Gabriele Losi** *(Neuroscience Institute, CNR, and Dept. of Biomedical Science, University of Padova)*

**09:45** Spatial organization of glutamate transporter GLT-1: from synaptic nanoscale distribution to excitatory synaptic modulation
**Marcello Melone** *(Polytechnic University of Marche, Ancona)*

**10:10** Role of dopaminergic midbrain neurons in memory and reward functions: Implications in Alzheimer's disease
**Marcello D'Amelio** *(Unit of Molecular Neurosciences, Dept. of Medicine, University Campus Biomedico, Roma)*

**10:35** cGMP and Aβ crosstalk: relevance of physiological synaptic mechanisms for Alzheimer's disease
**Daniela Puzzo** *(Dept. Biomedical and Biotechnological Sciences, section of Physiology, University of Catania)*

## Symposium 35: Sala Azzurra

**09:20-11:00** **Non coding RNAs and neurodegenerative diseases: the state of the art**
Chairman: **C. Cereda – S. Carelli**

**09:20** Non coding RNAs in Alzheimer's disease and related dementia: from the identification of preclinical biomarkers toward the discovery of therapeutic targets
**Chiara Fenoglio** *(University of Milano)*

**09:45** The emerging role of miRNAs in motor neuron disease pathogenesis
**Stefania Marcuzzo** *("Carlo Besta" Foundation Neurological Institute, Milano)*

**10:10** Natural antisense transcripts and long non-coding RNAs in Amyotrophic Lateral Sclerosis
**Stella Gagliardi** *("C. Mondino" National Neurological Institute, Pavia)*

**10:35** Long-non coding RNAs have a say in Parkinson disease
**Stephana Carelli** *(University of Milano)*

## Symposium 36: Sala Agrumi

**09:20-11:00** **Metallostasis and neurodegeneration**
Chairmen: **L. Zecca - E. Rizzarelli**

**09:20** Structure, synthesis and role of neuromelanins in brain aging and Parkinson disease
**Luigi Zecca** *(Institute of Biomedical Technologies – CNR, Segrate, Milano)*

**09:45** Role of DJ-1 and CCS in copper delivery to SOD1: implication for neurodegeneration
**Marco Bisaglia** *(Dept. of Biology, University of Padova)*

**10:10** Metal ions, dopamine, and oxidative stress: "Menage a trois"
**Luigi Casella** *(Dept. of Chemistry, University of Pavia)*

**10:35** Aβ monomers and copper interplay in the activation of CREB functions: identification of new therapeutic targets for the treatment of Alzheimer's disease
**Irina Naletova** *(Institute of Biostructures and Bioimages-CNR, Catania)*

**11:00-11:30** **COFFEE BREAK**

**11:30-12:15** **Plenary Lecture: Auditorium Rizzoli**
**P. Pietrini,** *IMT School for Advanced Studies, Lucca*
**Freedom: from philosophy to neurosciences**
Chairman: **F. Conti**

## Symposium 37 (ECM) *Joint Symposium SINS - SIPB*: Auditorium Rizzoli

**12:20-14:00** **Social neuroscience**
Chairmen: **F. Conti - M. Maj**

**12:20** From the Brain-Body system to intersubjectivity: A neuroscientific perspective
**Martina Ardizzi** *(University of Parma)*

**12:45** Social neuroscience: its relevance to research on mental disorders
**Silvana Galderisi** *("Luigi Vanvitelli" University of Campania, Napoli)*

**13:10** What genomics tells us about the polygenic nature of psychiatric disorders
**Enrico Domenici** *(University of Trento)*

**13:35** Modelling the impact of social cognition on real-life functioning in schizophrenia
**Paola Rocca** *(University of Torino)*

## Symposium 38: Sala Pinetina

**12:20-14:00** **Failure of protein quality control mechanisms and deregulated protein aggregation as common pathogenetic mechanisms in neurodegenerative diseases**
Chairmen: **V. Crippa - S. Carra**

**12:20** The chaperone HSPB8 removes insoluble forms of the C9ORF72 RAN translated dipeptides responsible for ALS/FTD.
**Riccardo Cristofani** *(University of Milano)*

**12:45** Granulostasis: protein quality control of ribonucleoprotein particles
**Serena Carra** *(University of Modena and Reggio Emilia)*

**13:10** Chaperones as suppressors of protein misfolded oligomer toxicity
**Fabrizio Chiti** *(University of Firenze)*

**13:35** Targeting neuronal proteostasis to treat the CNS in lysosomal storage diseases
**Antonio Monaco** *(TIGEM, Pozzuoli, Napoli)*

## Symposium 39: Sala Azzurra

**12:20-14:00** **In vivo optical approaches to investigate brain functionality**
Chairman: **A.L.A. Mascaro**

**12:20** In vivo imaging of rehabilitation-induced cortical plasticity after stroke
**Anna Letizia Allegra Mascaro** *(National Institute of Optic - Consiglio Nazionale delle Ricerche, INO-CNR)*

**12:45** Scanless two-photon fluorescence imaging in the intact mouse brain
**Serena Bovetti** *(Optical Approaches to Brain Function Laboratory, Dept. of Neuroscience and Brain Technologies, Istituto Italiano di Tecnologia, Genova)*

**13:10** Imaging regeneration with light sheet microscopy
**Andrea Bassi** *(Dept. Physics, University of Milano)*

**13:35** Developmental GABA shift in neocortical neurons demonstrated by two-photon microscopy in vivo
**Olga Cozzolino** *(NEST, Istituto Nanoscienze CNR e Scuola Normale of Pisa)*

## Symposium 40 *Under the patronage of FENS*: Sala Agrumi

**12:20-14:00** **Visions in neuroscience**
Chairman: **L. Lorusso**

**12:20** Imaging the brain: a closer look at the first neuroimaging technique
**Stefano Sandrone** *(King's College London, London, UK)*

**12:45** The "visual and sensory neurosciences" of Galileo Galilei
**Marco Piccolino** *(Centre of Neurosciences, University of Ferrara)*

**13:10** The vivid images of the art of memory
**Laura Bossi Régnier** *(Laboratoire SPHERE CNRS, UMR 7219, Université Paris-Diderot, Paris, France)*

**13:35** Vision, art and illusion
**Nick Wade** *(University of Dundee, Scotland, UK)*

**14:00-14:30** **Closing Remarks**