

# Program

## Sunday, June 23<sup>rd</sup> 2019

08:30-18.00 Registration

10:00-10:20 Welcome to MNS Meeting

10:20-11:05 **PLENARY LECTURE # 1**

**RISSANI ROOM**

**Carmen SANDI** (*Lausanne, Switzerland*): "Brain mitochondria in anxiety and stress-coping behaviors"

11:10-13:10 **SYMPOSIA 1-4**

### **S1: "Wired for eating: impact of early life experiences on brain feeding circuits"**

Chairs: **Sébastien BOURET** (*Lille, France*) & **Susan OZANNE** (*Cambridge, United Kingdom*)

**RISSANI ROOM**

**Susan OZANNE** (*Cambridge, United Kingdom*): "Early developmental influences on obesity and type 2 diabetes"

**Mohammed TAOUIS** (*Paris, France*): "Hypothalamic miRNAs contribute to leptin-dependent central regulation of energy homeostasis"

**Sébastien G. BOURET** (*Lille, France*): "Hormonal control of the development of hypothalamic circuits controlling feeding and energy balance"

**Latifa NAJAR** (*Paris, France*): « Environmental contaminants, gut microbiota and the programming of central metabolic systems»

### **S2: "The immune/inflammatory response as a common clue in neurodegenerative disorders: central and peripheral aspects"**

Chairs: **Renato BERNARDINI** (*Catania, Italy*) & **Dan FRENKEL** (*Tel Aviv, Israel*)

**TINMEL ROOM**

**Giuseppina CANTARELLA** (*Catania, Italy*): "Systemic immune response in Alzheimer's disease"

**Ronit PINKAS-KRAMARSKI** (*Tel Aviv, Israel*): "Autophagy by astrocytes in neurodegeneration"

**Anna CARTA** (*Cagliari, Italy*): "Modulation of microglia phagocytosis and cytokine production by PPAR-gamma agonists in experimental Parkinson"

**Dan FRENKEL** (*Tel Aviv, Israel*): "Aged astrocytes exacerbate neurodegeneration"

**S3: “Cognitive functions for action from early monkey to human”**

Chair: Patrizia FATTORI (*Bologna, Italy*)

**TICHKA ROOM**

**Marcello ROSA** (*Melbourne, Australia*): “Large scale analysis of cellular networks for sensorimotor integration in non-human primates”

**Claudio GALLETTI** (*Bologna, Italy*): “The dorsomedial visual stream in the macaque and human brain”

**Markus LAPPE** (*Muenster, Germany*): “Oculomotor signals in visual space perception”

**Annalisa BOSCO** (*Bologna, Italy*): “Characterization of different motor strategies in reaching the 3-dimensional space in healthy and pathological conditions”

**S4: “Understanding the mechanisms how stress impacts learning and memory”**

Chair: Harm J. KRUGERS (*Amsterdam, The Netherlands*)

**ORANGERS ROOM**

**Benno ROOZENDAAL** (*Nijmegen, The Netherlands*): “Basolateral amygdala activity enhances memory accuracy by down-regulating microRNA-134 in dentate gyrus”

**Maurizio POPOLI** (*Milan, Italy*): “Dynamic dissection of the response to acute stress in prefrontal cortex: a matter of resilience or vulnerability”

**Laurent GROC** (*Bordeaux, France*): “Dynamic interplay between glutamate receptor and stress hormone”

**Harm J. KRUGERS** (*Amsterdam, The Netherlands*): “Glucocorticoid hormones, memory engrams and memory formation”

13:20-14:20      **LUNCH**

14:20-16:20      **SYMPOSIA 5-7**

**S5: “Memory mechanisms in health and disease – brain regions, cell assemblies and synaptic matrix”**

Chair: Mazahir T. HASAN (*Leioa, Spain*)

**RISSANI ROOM**

**Mazahir T. HASAN** (*Leioa, Spain*): "Organization of fear memory engram"

**Ilaria BERTOCCHI** (*Turin, Italy*): "Perineuronal net and fear memories"

**Patrizia CAMPOLONGO** (*Rome, Italy*): "Fear memories and posttraumatic stress disorder"

**Matthew E. LARKUM** (*Berlin, Germany*): "Cellular mechanism for cortical associations"

**S6: "Selective neuronal vulnerability in Parkinson disease: new insights from alpha-synuclein and dopaminergic vulnerability"**

Chair: **Ledia F. Hernandez** (*Madrid, Spain*)

**TINMEL ROOM**

**Ledia F. HERNANDEZ** (*Madrid, Spain*): "Habitual and goal directed behavior in a Parkinson disease model"

**Jochen ROEPER** (*Frankfurt, Germany*): "Alpha-synuclein conformer-specific electrical responses of substantia nigra dopamine neurons"

**Nicola B. MERCURI** (*Rome, Italy*): "Early functional disturbances of the dopaminergic system in a rat model of PD"

**Joshua A. GOLDBERG** (*Jerusalem, Israel*): "Adaptive responses to alpha-synuclein in neurons at risk in Parkinson's disease"

**S7: "Brain cholesterol metabolism in health and diseases"**

Chair: **Nathalie THIRIET** (*Poitiers, France*)

**TICHKA ROOM**

**Elsa RODRIGUES** (*Lisboa, Portugal*): "CYP46A1 in neurons: it's not just about cholesterol hydroxylation"

**Sandrine BETUING** (*Paris, France*): "Cholesterol hydroxylase, CYP46A1, mediates neuroprotection in Huntington's disease"

**Valentina PALLOTTINI** (*Rome, Italy*): "Sex-, age- and region-dependent alterations of brain cholesterol metabolism: potential implications on autism"

**Nathalie THIRIET** (*Poitiers, France*): "Role of the brain cholesterol metabolism in drug addiction"

16:20-16:40      **COFFEE BREAK**

16:40-18:40      SYMPOSIA 8-11

**S8: “Dendritic spines: from biophysics to neuropathology”**

Chair: Menahem SEGAL (*Rehovot, Israel*)

**RISSANI ROOM**

**Javier DEFELIPE** (*Madrid, Spain*): “The dendritic spine story and their alterations in Alzheimer’s disease”

**Carlo SALA** (*Milano, Italy*): “Dendritic spine alterations in neurodevelopmental disorders”

**Martine AMMASSARI-TEULE** (*Rome, Italy*): “Paradoxical remodeling of spines under cognitive challenge in Alzheimer disease and fragile-X syndrome mice: evidence for neural compensation phenomena”

**Noam ZIV** (*Haifa, Israel*): “Dendritic spines: High-principled expectations and biological realities”

**S9: “Adult neurogenesis in all its states!”**

Chair: Nora ABROUS (*Bordeaux, France*)

**TINMEL ROOM**

**Harold CREMER** (*Marseille, France*): “Neuronal integration in the adult brain: Replacement or addition?”

**Emilie PACARY** (*Bordeaux, France*): “Regulation of developmental and adult neurogenesis by Rnd proteins”

**Maria LLORENS MARTIN** (*Madrid, Spain*): “Inflammation and adult neurogenesis”

**Nora ABROUS** (*Bordeaux, France*): “Influence of spatial learning on the integration of new neurons”

**S10: “Symposium on challenges in drug discovery for neurodegenerative diseases: neurochemical complexes and novel drug targets”**

Chair: K.S. JAGANNATHA RAO (*Panama City, Republic of Panama*)

**TICHKA ROOM**

**Muralidhar L. HEGDE** (*Houston, USA*): “DNA repair failure as biomarker and early target for drug discoveries in neurodegenerative diseases”

**Johant LAKEY** (*Panama City, Republic of Panama*): “Synthesis of novel molecules as neuroprotection-a hope for future drug discovery”

**Velmarini VASQUEZ** (*Houston, USA*): “Chromatin-bound oxidized  $\alpha$ -synuclein causes strand breaks in neuronal genomes *in vitro* models of Parkinson’s disease- novel drug target pathways”

**K.S. JAGANNATHA RAO** (*Panama City, Republic of Panama*): “Natural products as drug molecules- Proof-of principle and molecular mechanisms”

**S11: “Brain-liver axis and glutamate homeostasis”**

Chair: **Arturo ORTEGA** (*Mexico City, Mexico*)

**ORANGERS ROOM**

**Farrukh Abbas CHAUDHRY** (*Oslo, Norway*): “Glutamine transporters in liver”

**Fatiha CHIGR** (*Beni-Mellal, Morocco*): “Gut-brain interaction and general homeostasis”

**Mustapha NAJIMI** (*Brussels, Belgium*): “Glutamate and glutamine transporters in healthy and diseased liver”

**Arturo ORTEGA** (*Mexico City, Mexico*): “Dynamic modulation of glutamate and glutamine transporters gene expression”

18:45-19:30      **POSTER SESSION # 1**

20:00              **WELCOME COCKTAIL**

## Monday, June 24<sup>th</sup> 2019

08.00-08:45      **PLENARY LECTURE # 2**

**RISSANI ROOM**

**Yasmin HURD** (*New York, USA*): “The neurobiology of cannabis in deciphering its impact as “Drug” and “Medication””

08:50-10:50      **SYMPOSIA 12-15**

**S12: “Deep Brain Stimulation for psychiatric disorders: connections, effects, and mechanisms of the internal capsule and subthalamic nucleus targets”**

Chair: Suzanne HABER (*Rochester, USA*)

**RISSANI ROOM**

**Suzanne HABER** (*Rochester, USA*): “From monkey tracing studies to human connectivity: Linking circuits to the ALIC and STN DBS targets for psychiatric disease”

**Hagai BERGMAN** (*Jerusalem, Israel*): “Critic/actor networks within the cortex-basal ganglia circuits – from physiology to treatment”

**Christelle BAUNEZ** (*Marseille, France*): “Subthalamic nucleus DBS as a treatment for addiction: how frequency matters”

**Eileen JOYCE** (*London, United Kingdom*): “Differential effects of ventral capsule and subthalamic nucleus deep brain stimulation in severe obsessive compulsive disorder”

**S13: “Circadian rhythms in health and brain disease”**

Chair: Nouria LAKHDAR-GHAZAL (*Rabat, Morocco*)

**TINMEL ROOM**

**Karim FIFEL** (*Leiden, The Netherlands*): “Circadian alterations in Parkinson's disease”

**Nouria LAKHDAR-GHAZAL** (*Rabat, Morocco*): “Circadian rhythm disturbances in neurotoxicity conditions”

**Marina BENTIVOGLIO** (*Verona, Italy*): “Sleep and age-related neurodegenerative diseases”

**Howard M. COOPER** (*Bron, France*): “From circadian transcriptome regulation in primate to chronomedicine”

**S14: “New therapeutic opportunities in stroke based on conditioning strategy”**

Chair: Giuseppe PIGNATARO (*Naples, Italy*)

**TICHKA ROOM**

**Giuseppe PIGNATARO** (*Naples, Italy*): “Remote ischemic postconditioning: Looking for new druggable targets”

**Nicolas BLONDEAU** (*Nice, France*): “Brain adaptation to stressful stimuli: a new perspective on potential therapeutic approaches based on omega-3-derived compounds”

**Turgay DALKARA** (*Ankara, Turkey*): “Improving microcirculatory reperfusion as new neuroprotective tool”

**Clément CHOLLAT** (*Rouen, France*): “Translational application of brain conditioning”

**S15: “Molecular mechanisms of neuronal trafficking”**

Chairs: Maïté MONTERO (*Mont-Saint-Aignan, France*) & Nicolas VITALE (*Strasbourg, France*)

**ORANGERS ROOM**

**Stéphane GASMANN** (*Strasbourg, France*): « Molecular mechanisms of leptin trafficking across the tanycytes of median eminence”

**Christophe LETERRIER** (*Marseille, France*): “The axonal cytoskeleton at the nanoscale”

**Lydia DANGLLOT** (*Paris, France*): “Unraveling vesicular trafficking at pre and post synaptic sites by conventional and super resolution microscopy”

**Oussama EL-FAR** (*Marseille, France*): “The V-ATPase V0 subunits association state modulates SNARE dependent neurotransmission”

**Ira MILOSEVIC** (*Göttingen, Germany*): “Endophilin-A deficiency induces the FoxO3a-Fbxo32 network in the brain and causes dysregulation of autophagy and the ubiquitin-proteasome system”

10:50-11:10      **COFFEE BREAK**

11:10-13:10 SYMPOSIA 16-19

**S16: “The yin and yang of glucocorticoids in the pathophysiology of neuropsychiatric disorders”**

Chair: Marco Andrea RIVA (*Milan, Italy*)

**RISSANI ROOM**

**Peter GASS** (*Heidelberg, Germany*): “Modelling depression using mice with constitutive and inducible alterations of glucocorticoid receptor expression”

**Francesca CALABRESE** (*Milan, Italy*): “Dysregulation of glucocorticoid receptor activity underlies stress-induced cognitive deficit: influence of pharmacological treatment”

**Luisa PINTO** (*Braga, Portugal*): “Relevance of adult cytotgenesis for behavior in male and female rats and the role of glucocorticoids”

**Freddy JEANNETEAU** (*Montpellier, France*): “Neurotrophic-priming of glucocorticoid actions in the brain: Putting context to glucocorticoid signaling”

**S17: “Cellular senescence from development to ageing”**

Chairs: Isabel VARELA-NIETO (*Madrid, Spain*) & Vassilis GORGOULIS (*Athens, Greece*)

**TINMEL ROOM**

**Marco DEMARIA** (*Groningen, The Netherlands*): “Hallmarks of cellular senescence”

**Fabrizio D'ADDA DI FAGAGNA** (*Trieste, Italy*): “DNA damage response and cellular senescence”

**Daniel MUNOZ-ESPIN** (*Cambridge, United Kingdom*): “Developmental cell senescence”

**Isabel VARELA-NIETO** (*Madrid, Spain*): “Cytokines IGF-1 and TGF $\beta$  modulate developmental senescence in the inner ear”

**Vassilis GORGOULIS** (*Athens, Greece*): “Escape from senescence. Role in cancer”

**S18: “Epigenetic regulation of motivated behaviors”**

Chair: Mohamed KABBAJ (*Florida, USA*) & Zuoxin WANG (*Nouzilly, France*)

**TICHKA ROOM**

**Marcello WOOD** (*Irvine, USA*): “The role of epigenetic mechanisms in the medial habenula underlying reinstatement of drug-seeking”

**Mohamed KABBAJ** (*Florida, USA*): “Epigenetics of social bonding in prairie voles”

**Stefania MACCARI** (*Lille, France*): “Epigenetic animal model of early life stress”

**Xin-Yun LU** (*Georgia, USA*): “Epigenetic regulation of BDNF in different animal models of depression”

**Zuoxin WANG** (*Florida, USA*): “Epigenetics of paternal behaviors in prairie voles”

**S19: “Novel therapeutic strategies targeting the serotonin system”**

Chair: **Umberto SPAMPINATO** (*Bordeaux, France*)

**ORANGERS ROOM**

**Kathryn A. CUNNINGHAM** (*Galveston, USA*): “The serotonin<sub>2C</sub> receptor and opioids: new frontier for opioid-sparing therapeutics”

**Magdalena ZANIEWSKA** (*Krakow, Poland*): “The role of serotonin<sub>2C</sub> receptor stimulation in nicotine withdrawal”

**Francesc ARTIGAS** (*Barcelona, Spain*): “Therapeutic potential of RNAi for the treatment of major depressive disorder”

**Véronique SGAMBATO** (*Bron, France*): “Role of the serotonergic system in Parkinson's disease”

**Umberto SPAMPINATO** (*Bordeaux, France*): “The central serotonin<sub>2B</sub> receptor: control of serotonin and dopamine systems and therapeutic implications”

13:15-14:15      **LUNCH**

14:20-16:20      **SYMPOSIA 20-23**

**S20: “New insights into the autistic brain: from physiopathology to therapeutic strategies”**

Chairs: **Viviana TREZZA** (*Roma, Italy*) & **Julie LE-MERRER** (*Nouzilly, France*)

**RISSANI ROOM**

**Nahit MUKKADES** (*Istanbul, Turkey*): “Is there possibility to recover from autism?”

**Stefano VICARI** (*Rome, Italy*): “Autism spectrum disorder international consortium (ASDIC): Moving towards sustainable services for autism in low- and middle- income countries”

**Jérôme BECKER** (*Nouzilly, France*): “Facilitating glutamate mGlu4 receptor activity relieves autistic-like deficits in multiple mouse models: therapeutic implications”

**Evan ELLIOTT** (*Safed, Israel*): “Microbiome-Epigenome axis in the development and treatment of autism”

**Camilla BELLONE** (*Geneva, Switzerland*): “Channelopathy in autism: a potential genetic factor underlying social dysfunction”

**S21: “Modulation of brain transcriptional regulators: in vivo plasticity and neurological diseases”**

Chairs: **Luigi FORMISANO** (*Naples, Italy*)

**TINMEL ROOM**

**Fabio BENFENATI** (*Genova, Italy*): “Characterization of REST activity and expression in neuroinflammatory diseases”

**Mounia BENSAID** (*Rabat, Morocco*): “Identification of transcription factor FEZF2 for autism spectrum disorders diagnosis”

**Luigi FORMISANO** (*Naples, Italy*): “Transcriptional and epigenetic regulation of NCXs in brain ischemia”

**Pietro BALDELLI** (*Genova, Italy*): “Role of REST in neurological diseases associated to chronic neuronal hyperactivity”

**Michel SIMONNEAU** (*Paris, France*): “Transcriptional dysregulation in neuropsychiatric disorders”

**S22: “The role of autophagy and the unfolded protein response in the mechanism of mood stabilization”**

Chair: **Galila AGAM** (*Beer-Sheva, Israel*)

**TINMEL ROOM**

**Changlian ZHU** (*Gothenburg, Sweden*): “Neuroprotection by selective neuronal deletion of Atg7 in neonatal brain injury”

**Illana GOZES** (*Tel-Aviv, Israel*): “Autophagy plays a key role in the pathophysiology of schizophrenia”

**Galila AGAM** (*Beer-Sheva, Israel*): “The possible interaction between mitochondrial function and autophagy in the mechanism of mood stabilization”

**Miriam L. GREENBERG** (*Wayne, USA*): “Valproate, the mood-stabilizing drug, induces the UPR”

**Sara EYAL** (*Jerusalem, Israel*): “Cathepsins, epilepsy, and mood disorders”

**S23: “New insights for assessing the mechanisms underlying the psychiatric disorders to improve their therapeutic approach”**

Chairs: **Vincenzo MICALE** (*Catania, Italy*) & **Kyriaki SIDIROPOULOU** (*Crete, Greece*)

**ORANGERS ROOM**

**Kyriaki SIDIROPOULOU** (*Crete, Greece*): “Sex similarities and differences in neurodevelopmental mouse models of schizophrenia”

**Claudio D'ADDARIO** (*Teramo, Italy*): “Epigenetic regulation of BDNF in bipolar disorder: link between gene and environment”

**Tibor STARK** (*Brno, Czech Republic*): “Early modulation of the endocannabinoid system in schizophrenia”

**Eva M. MARCO** (*Madrid, Spain*): “Sex differences in the consequences of early life stress: neurobiological and behavioral effects”

16:20-16:40      **COFFEE BREAK**

16:40-18:40      **SYMPOSIA 24-27**

**S24: “Refining the pathophysiological impact of the environment on the developing brain”**

Chair: **Anthony FALLUEL-MOREL** (*Mont-Saint-Aignan, France*)

**RISSANI ROOM**

**Vincent LELIÈVRE** (*Strasbourg, France*): “Effect of perinatal stress on cortical development, and consequences on pain controls”

**Anthony FALLUEL-MOREL** (*Mont-Saint-Aignan, France*): “Modulation of developmental redox homeostasis, and impact on brain circuitry”

**Rochellys DIAZ HEIJTZ** (*Stockholm, Sweden*): “The impact of gut microbiota on brain development and behavior: Implications for autism spectrum disorder”

**Pierre GRESSENS** (*Paris, France*): “Impact of Zika virus and CMV on the developing brain”

**Bruno GONZALEZ** (*Rouen, France*): “Placenta-Brain axis: Effect of alcohol consumption during pregnancy on vasculo-dependent corticogenesis of the fetal brain”

**S25: “Transcranial magnetic stimulation in addiction: focus on mechanisms and brain areas”**

Chair: **Marco DIANA** (*University of Sassari, Italy*)

**TINMEL ROOM**

**T. RAIJ** (*Chicago, USA*): “Targeting of addiction-related executive control and fear memory circuits with TMS”

**D. MARTINEZ** (*New York, USA*): “The role of TMS on drug seeking behavior”

**G. MARTINOTTI** (*Chieti, Italy*): “From clinical data to neurobiology: results and hints from a double blind clinical study in cocaine addicts”

**A. BONCI** (*Baltimore, USA*): “Challenges and opportunities in creating rodent models of rTMS and other stimulation modalities”

**S26: “Astrocytes: a target of the brain noradrenergic system”**

Chair: **Robert ZOREC** (*Ljubljana, Slovenia*)

**TICHKA ROOM**

**Giampero LEANZA** (*University of Catania, Italy*): “The role of locus coeruleus-noradrenergic neurons in regulation of memory formation”

**Yuriy PANKRATOV** (*Coventry, United Kingdom & Kaliningrad, Russia*): “Astroglial adrenergic receptors in glia-neuron communications”

**Nina VARDJAN** (*Ljubljana, Slovenia*): “Adrenergic Ca<sup>2+</sup> and cAMP excitability in astrocytes: effects on glucose availability and morphological plasticity”

**Anja TESCHEMACHER** (*Bristol, United Kingdom*): “Stimulation of central noradrenaline release by L-lactate”

**S27: “New insights in the hypothalamic regulation of energy metabolism”**

Chairs: **Nicolas CHARTREL** (*Mont-Saint-Aignan, France*) & **Carole ROVERE** (*Valbonne, France*)

### ORANGERS ROOM

**Nicolas CHARTREL** (*Mont-Saint-Aignan, France*): “26RFa: a neuropeptide involved in the hypothalamic regulation of energy homeostasis”

**Ophélie LE THUC** (*Neuherberg, Germany*): “The role of astrocytes for the central regulation of metabolism”

**Carole ROVÈRE** (*Valbonne, France*): “High fat diet consumption induces an acute and specific post-prandial hypothalamic inflammation involving both astrocyte and microglia cells”

**Mohamed NAJIMI** (*Beni Mellal, Morocco*): “Neurohormonal control of metabolism and food intake in stressful conditions”

18:45-19:30

**PLENARY LECTURE # 3**

**RISSANI ROOM**

**Agnès GRUART** (*Seville, Spain*): “Learning and memory in behaving mammals”

19:30-20:30

**POSTER SESSION # 2**

## Tuesday, June 25<sup>th</sup> 2019

08:00-08:45

PLENARY LECTURE # 4

RISSANI ROOM

**Vincent PRÉVOT** (*Lille, France*): “When the hypothalamus says NO, a role for nitric oxide in fertility, olfaction and cognition”

08:50-10:50

SYMPOSIA 28-31

**S28: “Neuroinflammation and glial plasticity in anxiety and depression: Underlying mechanisms and novel therapeutic targets”**

Chair: **Luisa PINTO** (*Braga, Portugal*)

RISSANI ROOM

**Raffaella MOLteni** (*Milan, Italy*): “Stress-induced vulnerability for depression: role of neuroinflammation in resilience and antidepressant-treatment”

**Nicolas SINGEWALD** (*Innsbruck, Austria*): “Aberrant neuroinflammatory system in high anxiety mice: sensitivity to treatment approaches”

**Raz YIRMIYA** (*Jerusalem, Israel*): “Modulation of microglial activation status as a novel therapeutic approach to depression”

**Luisa PINTO** (*Braga, Portugal*): “Glial plasticity as a key mechanism underlying the pathophysiology of depression”

**S29: “Transcriptomics, genomics and cell signaling: Probing neuroscience systems biology and facilitating gene and pathway discoveries”**

Chair: **Youssef ANOUAR** (*Mont-Saint-Aignan, France*) & **Lee EIDEN** (*Bethesda, USA*)

TINMEL ROOM

**Abdel G. ELKAHLOUN** (*NIH, USA*): “Discovery of candidate therapeutic targets in cancer, schizophrenia and Alzheimer’s disease through transcriptomic analysis”

**Isabelle LIHRMANN** (*Mont-Saint-Aignan, France*): “What’s in a name? The discovery of a neuroprotective protein through microarray analysis of PC12 cell gene expression changes underlying cell survival and differentiation”

**Lee E. EIDEN** (*Bethesda, USA*): "Parcellation of cyclic AMP signaling and the discovery of NCS-Rapgef2: Microarray examination of the 'transitional transcriptome' in health and disease"

**Nicolas DE ROUX** (*Paris, France*): "Genetics of abnormal puberty timing, new insights in mechanisms in neurodevelopment and neurodegenerative disorders"

**S30: "Interrogating the role of sex steroid hormones in cognition"**

Chair: **Mylène POTIER** (*Bordeaux, France*)

**TICHKA ROOM**

**Sakina MHAOUTY KODJA** (*Paris, France*): "Role of neural sex steroid receptors in the modulation of temporal order memory"

**Azza SELLAMI** (*Tunis, Tunisia*): "Rescuing age-related decline of declarative memory with estradiol: from temporal binding to extra-synaptic migration of GluN2B in CA1"

**Agnès LACREUSE** (*Amherst, USA*): "Neurocognitive effects of estrogens in aging nonhuman primates"

**Christina DALLA** (*Goudi, Greece*): "Sex differences in learning and emotion: effects of pharmacological approaches"

**S31: "Dissecting the neural circuit dysfunction at the root of mental disorders"**

Chairs: **Jacques BARIK** (*Nice, France*) & **Frank MEYE** (*Utrecht, The Netherlands*)

**ORANGERS ROOM**

**Jacques BARIK** (*Nice, France*): "Mesopontine inputs to the reward system conveys depressive-like symptoms"

**Anna BEYELER** (*Bordeaux, France*): "Brain substrates encoding emotional valence"

**Frank J. MEYE** (*Utrecht, The Netherlands*): "Comfort for the troubled mind: Unravelling the neural basis for stress-feeding"

**Camilla BELLONE** (*Genève, Switzerland*): "Neuronal circuits underlying social dysfunctions"

10:50-11:10      **COFFEE BREAK**

11:10-13:10 SYMPOSIA 32-35

**S32: “Emerging role of HDAC inhibition in neurodegenerative diseases”**

Chair: Lucio ANNUNZIATO (*Naples, Italy*)

**RISSANI ROOM**

**Lucio ANNUNZIATO** (*Naples, Italy*): “Epigenetic regulation of NCX3 transcription in brain ischemia by DREAM/HDAC4/HDAC5 complex: Role of HDAC class II inhibition”

**Alberto CHIARUGI** (*Florence, Italy*): “Pharmacological inhibition of histone deacetylases in experimental models of amyotrophic lateral sclerosis”

**Ana Cristina REGO** (*Coimbra, Portugal*): “Role of HDAC inhibitors in Huntington’s disease”

**Olga VALVERDE** (*Barcelona, Spain*): “HDAC inhibition as a new pharmacological strategy to counteract neurological alterations associated with prenatal and lactation ethanol exposure”

**S33: “Brain & behaviour metaplasticity”**

Chair: Christian CHIAMULERA (*Verona, Italy*)

**TINMEL ROOM**

**Wickliffe ABRAHAM** (*Dunedin, New Zealand*): “Astrocyte-mediated metaplasticity in health and disease”

**Rosalina FONSECA** (*Lisboa, Portugal*): “The interplay between neuronal activity and actin dynamics in synaptic cooperation and competition”

**Raffaella TONINI** (*Genoa, Italy*): “Plasticity of striatal eCB macromolecular complexes supports behavioral flexibility”

**Shira KNAFO** (*Leioa, Spain*): “Synaptic PTEN activation shifts synaptic plasticity towards depression while enhancing social behavior”

**Christian CHIAMULERA** (*Verona, Italy*): “Metaplastic effects of NMDA channel blockade on reward-related processes and behaviors in rats”

**S34: “Beyond pathogenesis and severity in multiple sclerosis: time to promote remyelination”**

Chair: Fernando De CASTRO (*Madrid, Spain*)

**TICHKA ROOM**

**Bibi BIELEKOVA** (*Bethesda, USA*): "Biological basis of multiple sclerosis severity"

**Vanja TEPAVCEVIC** (*Zamudio, Spain*): "OPC energy metabolism and remyelination"

**Fabian DOCAGNE** (*Caen, France*): "Tissue plasminogen activator shows oligodendrocytes the road for remyelination"

**Valentina FOSATTI** (*New York, USA*): "Human iPSC-derived glia: current challenges and future perspectives".

**Fernando DE CASTRO** (*Madrid, Spain*): "Cross-species and age-related heterogeneity of brain OPCs: preclinical studies with human adult OPCs as the compass for fruitful clinical trials on remyelination"

**S35: "New GPCR targets to improve obesity, depression and epilepsy"**

Chair: Giuseppe DI GIOVANNI (*Malta*)

**ORANGERS ROOM**

**Lora K. HEISLER** (*Aberdeen, United Kingdom*): "GPCR targets to improve obesity"

**Evgeni PONIMASKIN** (*Hannover, Germany*): "Possible role of heterodimerization between serotonin receptors 5-HT1A and 5-HT7 in depression"

**M. RASENICK** (*Chicago, USA*): "A G protein and cAMP-dependent "biosignature" shared by conventional and "rapid-acting" antidepressant Ketamine"

**Gabriele DEIDDA** (*Msida, Malta*): "GPCRs in experimental absence epilepsy"

**Cristiano BOMBARDI** (*Bologna, Italy*): "Functional neuroanatomy of 5-HT2A receptor"

13:15-14:15      **LUNCH**

14:20-16:20      **SYMPOSIA 36-40**

**S36: "Glial and perivascular sensing in non-neuronal brain networking"**

Chair: Jan Pieter KONSMAN (*Bordeaux, France*)

**RISSANI ROOM**

**Agnès NADJAR** (*Bordeaux, France*): "Nutritional lipids tune shaping of neural circuits during brain development"

**Jan Pieter KONSMAN** (*Bordeaux, France*): “Brain macrophages, from border patrollers to whistleblowers during inflammation”

**Nicola MARCHI** (*Montpellier, France*): “The pericyte-endothelial interface and inflammation in epilepsy”

**Jérôme BADAUT** (*Bordeaux, France*): “How does brain react after mild traumatic brain injury: an astrocytic view?”

**Brahim NAIT OUMESMAR** (*Paris, France*): “Oligodendrocyte-axonal contacts in myelin development and repair”

**S37: “On the role of multiple D2R heteroreceptor complexes in ADHD, schizophrenia and cocaine use disorder”**

Chairs: Kjell FUXE (*Stockholm, Sweden*)

**TINMEL ROOM**

**Fang LIU** (*Toronto, Canada*): “A potential therapeutic target for the treatment of ADHD”

**Kjell FUXE** (*Stockholm, Sweden*): “Multiple D2 heteroreceptor complexes: new targets for treatment of schizophrenia”

**Luca FERRARO** (*Ferrara, Italy*): “NTS-D2 heteroreceptor complexes and their role in schizophrenia”

**Karolina WYDRA** (*Kraków, Poland*): “On the role of adenosine (A)<sub>2</sub>A receptors and A2AR-D2R interactions in cocaine-induced reward and cocaine seeking: a pharmacological and neurochemical analysis in rats”

**Dasiel BORROTO-ESCUELA** (*Stockholm, Sweden*): “Cocaine self-administration increases A2AR-D2R heteroreceptor complexes and their receptor-receptor interactions in nucleus accumbens shell. A molecular mechanism for cocaine addiction”

**S38: “Comparative approaches and neuroscience research”**

Chairs: André CALAS (*Bordeaux, France*) & Yves TILLET (*Nouzilly, France*)

**TICHKA ROOM**

**André CALAS** (*Bordeaux, France*): “Comparative approaches in neuroscience: an overview from history”

**Massimiliano BELTRAMO** (*Nouzilly, France*): “Neuroendocrine control of reproduction in sheep”

**Loreta MEDINA** (*Lleida, Catalonia, Spain*): “Disentangling the amygdala using an evolutionary developmental neurobiology approach”

**Olivier KAH** (*Rennes, France*): “The enigma of aromatase B in the brain of zebrafish: from basic to applied research”

**Jean-Louis NAHON** (*Valbonne, France*): “Brain mapping and functional characterization of the human MCHR2 in a “humanized” mouse model”

**S39: “Microbiota-brain axis in brain development and behavior”**

Chair: **Sergueï FETISSOV** (*Mont-Saint-Aignan, France*)

**ORANGERS ROOM**

**Sylvie RABOT** (*Paris, France*): “Effect of microbiota metabolites on neuroendocrine and behavioural responses to stress”

**Gérald CLARKE** (*Cork, Ireland*): “Targeting the microbiome-gut-brain axis: translational implications for stress-related disorders”.

**Roman YUNES** (*Moscow, Russia*): “The antidepressant effect of GABA-producing Lactobacilli and Bifidobacteria”

**Rochellys DIAZ HEIJTZ** (*Stockholm, Sweden*): “Microbiota and the brain - Moving towards mechanisms”

**Sergueï FETISSOV** (*Mont-Saint-Aignan, France*): “Microbiota and host feeding and emotion”

16:20-16:40      **COFFEE BREAK**

16:40-18:40      **SYMPOSIA 40-43**

**S40: “Novel psychoactive substances (NPS): Mind over matter?”**

Chairs: **Aviv WEINSTEIN** (*Ariel, Israel*) & **Liana FATTORE** (*Cagliari, Italy*)

**RISSANI ROOM**

**Matteo MARTI** (*Ferrara, Italy*): “Neurological, sensorimotor and cardiorespiratory alterations induced by methoxetamine and dissociative drugs in mice”

**Aviv WEINSTEIN** (*Ariel, Israel*): “Effect of synthetic cannabinoids in humans on cognitive studies and comorbidity with psychiatric disorders”

**Maria Antonietta DE LUCA** (*Cagliari, Italy*): “Intravenous self-administration (IVSA) of the synthetic cannabinoid receptor agonist JWH-018 in adolescent mice: Neuroinflammatory and behavioral sequelae in adulthood”

**Zsolt DEMETROVICS** (*Budapest, Hungary*): “Characteristics of the intravenous use of new psychoactive substances”

**Andrea PETROCZI** (*London, United Kingdom*): “Functional use of performance and appearance enhancing substances (PAES) in recreational sport”

#### **S41: “Neurobiological bases of natural and non-natural rewards”**

Chair: **Claudio D’Addario** (*Teramo, Italy*)

##### **TINMEL ROOM**

**Viviana TREZZA** (*Roma, Italy*): “Neurobiology of social reward: from physiology to pathophysiology”

**Claudio D’ADDARIO** (*Teramo, Italy*): “Epigenetic regulation in alcoholism: parallel alterations in obsessive compulsive disorder”

**Francis CHAOULOFF** (*Bordeaux, France*): “Endocannabinoids gate exercise motivation”

**Stéphanie CAILLÉ** (*Bordeaux, France*): “Attentional capacities can predict the motivational properties of nicotine in rodents”

#### **S42: “Neurobiology of exercise: what have we learned from animal models?”**

Chair: **Mercè CORREA** (*Castelló, Spain*)

##### **TICHKA ROOM**

**Mercè CORREA** (*Castelló, Spain*): “Modulation of dopamine function after different types of exercise: impact on selection of active vs. passive sources of reinforcement in mice”

**John D. SALAMONE** (*Connecticut, USA*): “Pharmacological manipulations of selection of voluntary exercise in rodents”

**José Luis FERRAN** (*Murcia, Spain*): “Dopaminergic effects and metabolic changes during an exercise program in a forced running wheel system in adolescent rats”

**Rui Daniel S. PREDIGER** (*Santa Catarina, Brazil*): « The impact of physical exercise in Parkinson's disease: from neuroprotection to the management of motor and non-motor symptoms”

**S43: “Sex differences in classical and novel mechanisms involved in depression”**

Chair: Christina DALLA (*Athens, Greece*)

**ORANGERS ROOM**

**Nikolaos KOKRAS** (*Athens, Greece*): “Antidepressants and the HPA axis in males and females”

**Mohamed KABBAJ** (*Florida, USA*): “Sex differences in ketamine’s antidepressant effects”

**Jodi PAWLUSKI** (*Rennes, France*): “Long-term sexually differentiated effects of perinatal SSRIs on social behaviors and neuroplasticity”

**Ioannis SOTIROPOULOS** (*Braga, Portugal*): “Molecular underpinnings of sex-dependent hippocampal vulnerability in depression and Alzheimer’s disease”

18:45-19:45      **ORAL COMMUNICATIONS SESSION 1**

19:50-20:50      **MNS GENERAL ASSEMBLY**

## Wednesday, June 26<sup>th</sup> 2019

08:00-08:45

PLENARY LECTURE # 5

RISSANI ROOM

**Giorgio RACAGNI** (*Milan, Italy*): “Innovative aspects in the mechanism of action of antipsychotic drugs”

08:50-10:50

SYMPOSIA 44-47

**S44: “Knock-in mouse models for Alzheimer’s disease: Breakthrough or more of the same?”**

Chair: **Gernot RIEDEL** (*Aberdeen, Scotland*)

RISSANI ROOM

**Bettina PLATT** (*Aberdeen, Scotland*): “PLB mice: Targeted knock-in of human amyloid or beta-secretase genes produce pathology reminiscent of AD”

**Jacques MICHEAU** (*Bordeaux, France*): “Behavioral and MRI characterization of PLB2Tau knock in mice: a novel mouse model of familial fronto-temporal dementia”

**Diane HANGER** (*London, United Kingdom*): “Tauopathy induced by low level expression of a human brain-derived tau fragment in mice”

**Rudi D’HOOGHE** (*Leuven, Belgium*): “Hyper-synchronicity in the prefrontal-hippocampal network of APPNL-G-F AD mice”

**S45: “New insights on endocannabinoid system-mediated synaptic transmission and plasticity in health and disease”**

Chair: **Roberto COLANGELI** (*Calgary, Canada*)

TICHKA ROOM

**Rosalina FONSECA** (*Lisbon, Portugal*): “Rules of synaptic competition in the amygdala: activation of endocannabinoid receptors determine winners and losers”

**Jeffrey G. TASKER** (*New Orleans, USA*): “Stress modulation of inhibitory synaptic circuits in the basolateral amygdala”

**Roberto COLANGELI** (*Calgary, Canada*): “Role of the endocannabinoid system in comorbid cognitive and emotional alterations associated with seizures”

**Antonia MANDUCA** (*Marseille, France*): “Sex specific endophenotypes of cannabinoid exposure”

**S46: “In search for the neural substrates underlying post-traumatic stress disorder symptomatology and vulnerability”**

Chair: **Muriel KOEHL** (*Bordeaux, France*)

**TINMEL ROOM**

**Aline DESMEDT** (*Bordeaux, France*): “Preventing and treating PTSD-like memory by the hippocampus-dependent trauma contextualization”

**Muriel KOEHL** (*Bordeaux, France*): “Vulnerability to PTSD-like memory impairments induced by stress in utero”

**Marloes HENCKENS** (*Nijmegen, The Netherlands*): “The neural signature of trauma susceptibility”

**Nikolaos DASKALAKIS** (*Belmont, USA*): “Systems biology of PTSD: translational studies in human and rodents”

**S47: “Messengers of pain sensitization”**

Chairs: **Jacques NOEL** (*Nice, France*) & **Pierrick POISBEAU** (*Strasbourg, France*)

**ORANGERS ROOM**

**Cynthia ABOUD** (*Beirut, Lebanon*): “RELAXIN-3/RXFP3 forebrain systems control nociceptive sensitization via descending pathways”

**Géraldine GAZZO** (*Strasbourg, France*): “The key role of oxytocin and early life mother-infant interactions to shape the adult nociceptive system, pain sensitivity and descending controls in the rat.”

**Wendy IMLACH** (*Melbourne, Australia*): “Targeting spinal inhibitory circuits in neuropathic pain.”

**Ahmed NEGM** (*Nice, France*): “High fat diet causes hyperlipidemia and systemic inflammation associated with thermal hyperalgesia, role of ASIC channels.”

**Wahiba SIF-EDDINE** (*Marrakech, Morocco*): “Dysfunction of the affective component of pain in ADHD animal model: effect of methylphenidate.”

10:50-11:10      **COFFEE BREAK**

11:10-13:10      SYMPOSIA 48-51

**S48: “New perspectives on fear memory-related neuronal networks: Integrating electrophysiological, molecular and behavioral approaches”**

Chair: Maria MORENA (*Calgary, Canada*)

**RISSANI ROOM**

**Ingrid EHRlich** (*Tübingen & Stuttgart, Germany*): “Structure and function of amygdala intercalated cell networks”

**Raül ANDERO** (*Barcelona, Spain*): “Opposite-sex effects in molecular and behavioral signatures of fear memory consolidation”

**Maria MORENA** (*Calgary, Canada*): “Endocannabinoid regulation of the impact of stress on aversive memory processes”

**Steven LAVIOLETTE** (*London, Canada*): “Cannabinoid signaling in the mesocorticolimbic system controls rewarding and aversive emotional memory formation”

**S49: “Progress in risk factors and development of Parkinson’s disease”**

Chair: Micaela MORELLI (*Cagliari, Italy*)

**TINMEL ROOM**

**Simone ENGELENDER** (*Haifa, Israel*): “Alpha-synuclein pathological role in Parkinson’s disease”

**Per SVENNINGSSON** (*Stockholm, Sweden*): “Increased risk of Parkinson’s disease revealed through biomarkers”

**Micaela MORELLI** (*Cagliari, Italy*): Role of neuroinflammation on toxin and genetic progressive models of Parkinson’s disease

**Patricia GARCIA-SANZ** (*Madrid, Spain*): “Implication of cholesterol accumulation and GBA mutations in Parkinson’s disease”

**S50: “ADNP and the ADNP syndrome: From gene to autism”**

Chair: Illana Gozes (*Tel-Aviv, Israel*)

**TICHKA ROOM**

**Illana GOZES** (*Tel-Aviv, Israel*): "ADNP from discovery to syndrome and therapeutics"

**Frank KOOY** (*Antwerp, Belgium*): "Clinical presentation of a complex neurodevelopmental disorder caused by mutations in ADNP"

**Giuseppe TESTA** (*Milan, Italy*): "From iPSCs to autistic syndromes"

**Marc BUEHLER** (*Basel, Switzerland*): "DNA sequence specific targeting of the ChAHP complex to euchromatin governs lineage-specification of pluripotent stem cells"

**Christopher E. PEARSON** (*Toronto, Canada*): "De novo gene mutations"

### **S51: "The flexibility of motor control: role of cortical and subcortical structures"**

Chair: Stefano FERRAINA (*Rome, Italy*)

#### **ORANGERS ROOM**

**Stefano FERRAINA** (*Rome, Italy*): "Dynamic decision making"

**Salvatore GALATI** (*Lugano, Switzerland*): "Modulation of reticular and motor thalamic nucleus in parkinsonian state".

**Sabrina RAVEL** (*Aix-Marseille, France*): "ST, STN and GPe contribution in the control of motivated behaviors".

**Maurizio CASARRUBEA** (*University of Palermo, Italy*): "Application of the detection and analysis of the T pattern to study the behavioral anomalies induced by the lesion of the basal ganglia"

13:15-14:15      **LUNCH**

14:20-16:20      **SYMPOSIA 52-55**

### **S52: "Developing brain in danger: critical periods of vulnerability from in-utero to adolescence"**

Chair: Carla CANNIZZARO (*Palermo, Italy*)

#### **RISSANI ROOM**

**Omry KOREN** (*Safed, Israel*): "The birth of a microbiome: changes to the microbiome during gestation and infancy"

**Giuseppe DI GIOVANNI** (*Msida, Malta & Cardiff, United Kingdom*): "Role of serotonin/GABA interaction in childhood absence epilepsy"

**Miriam MELIS** (*Cagliari, Italy*): “Functional consequences of maternal marijuana exposure on offspring dopamine system”

**Carla CANNIZZARO** (*Palermo, Italy*): "Mothering under the influence: THC effect on mother-infant dyad and beyond"

**Sophie LAYÉ** (*Bordeaux, France*): “Early life dietary polyunsaturated fatty acids program brain wiring and behavior later in life through their effects on microglia activity”

**S53: “Systems and neural mechanisms underlying creative performance and innovation”**

**Chairs:** Radwa KHALIL (*Bremen, Germany*), Ahmed KARIM (*Tübingen, Germany*) & Ben GODDE (*Bremen, Germany*)

**TINMEL ROOM**

**Thomas BORAUD** (*Bordeaux, France*): “A natural history of skills: Basal ganglia and cortex through vertebrate evolution”

**Laszlo ZABORSZKY** (*Newark, USA*): "Functional organization of the basal forebrain cholinergic system"

**Fredrick ULLÉN** (*Stockholm, Sweden*): “Twin modelling studies of creative achievement and neuroimaging studies of improvisation”

**Radwa KHALIL** (*Bremen, Germany*): “Competition between emotion and divergent thinking”

**Ahmed KARIM** (*Tübingen, Germany*): “Effects of transcranial brain stimulation on creativity and decision making”

**S54: “Therapeutic potential of the 5-HT<sub>2C</sub> receptor agonist lorcaserin for addictive disorders”**

**Chair:** Giuseppe DI GIOVANNI (*Msida, Malta & Cardiff, United Kingdom*)

**TICHKA ROOM**

**Philippe DE DEURWAERDÈRE** (*Bordeaux, France*): “Neurophysiology and Neurochemistry of lorcaserin: preferential modulation of the mesoaccumbens dopaminergic system?”

**Guy HIGGINS** (*Toronto, Canada*): “Lorcaserin as a treatment for substance abuse”

**Massimo PIERUCCI** (*Malta*): “Electrophysiological effects of lorcaserin on acute and chronic nicotine-induced changes in the LHb and VTA activity”

**Charles P. FRANCE** (*San Antonio, USA*): “Preclinical assessment of lorcaserin for treating cocaine abuse disorder”

**S55: “Targeting resolution of inflammation: a new therapeutic option in neuroinflammatory diseases”**

Chair: Enza LACIVITA (*Bari, Italy*)

**ORANGERS ROOM**

**Mauro PERRETTI** (*London, United Kingdom*): “Players and targets of resolution - A new approach to inflammatory pathologies”

**Valerio CHIURCHIÙ** (*Rome, Italy*): “Resolution of inflammation is altered in several neurodegenerative diseases: novel implications for their pathogenesis and therapy”

**Enza LACIVITA** (*Bari, Italy*): “N-formyl peptide receptor 2 (FPR2) agonists have neuroprotective properties in animal models of Alzheimer disease”

**Ru-Rong JI** (*Durham, USA*): “Resolution of inflammation, neuroinflammation and pathological pain with pro-resolution strategies”

16:20-16:40      **COFFEE BREAK**

16:40-18:40      **SYMPOSIA 56-59**

**S56: “The neuropeptide relaxin3 system in modulating social behavior, memory, arousal and feeding”**

Chair: Francisco E. OLUCHA-BORDONAU (*Castellón, Spain*)

**RISSANI ROOM**

**Aldo DONIZETTI** (*Naples, Italy*): “The nucleus incertus-relaxin3-RXFP3 in *Danio rerio*. Evolutionary comments”

**Anna BLASIAK** (*Krakow, Poland*): “Bidirectional pathways between the hypothalamus and the nucleus incertus in controlling arousal and food intake”

**Mohsen NATEGH** (*Tehran, Iran*): “Role of the nucleus incertus network in spatial memory: effects of lidocaine inactivation”

**Andrew L. GUNDLACH** (*Melbourne, Australia*): “Deciphering functional roles of relaxin-3/RXFP3 systems in anxiety and memory: chronic receptor activation and depletion studies”

**Francisco E. OLUCHA-BORDONAU** (*Castellón, Spain*): “Role of the nucleus incertus and the relaxin3/rxfp3 system in social behavior”

**S57: “Novel insights on the role played by endocannabinoids and their lipid analogues in neuropsychiatric/neurodegenerative disorders”**

Chair: Silvana GAETANI (*Rome, Italy*)

**TINMEL ROOM**

**Antonia SERRANO** (*Málaga, Spain*): “Protective role of the oleoylethanolamide in neurodegeneration and neuroinflammation induced by binge drinking”

**Maria SCHERMA** (*Cagliari, Italy*): “Possible role of the endocannabinoid system in the physiopathology of Anorexia Nervosa”

**Pucci MARIANGELA** (*Teramo, Italy*): “Preclinical evidence of endocannabinoid system regulation in Binge Eating”

**Tommaso CASSANO** (*Foggia, Italy*): “The role of FAAH as potential pharmacological target for novel anti-Alzheimer therapies: preclinical evidence”

**Nathalie THIRIET** (*Poitiers, France*): « Neuroprotective effects of endocannabinoids on methamphetamine's toxicity”

**S58: “Hyperkinetic movement disorders: neurobiological insights from animal models and patients”**

Chair: Alessandro STEFANI (*Rome, Italy*)

**TICHKA ROOM**

**Alessandro STEFANI** (*Rome, Italy*): "STN-DBS in mammalian models and clinical practice: scenes from a marriage?"

**Barbara PICCONI** (*Rome, Italy*): “Novel molecular and synaptic approaches to study Levodopa-Induced Dyskinesia in an experimental model of PD”

**Salvatore GALATI** (*Lugano, Switzerland*): “Role of cortical homeostatic plasticity in cervical dystonia”

**Alain KAELIN** (*Lugano, Switzerland*): "New insight into the pathophysiology of dystonia"

**S59: “Brain adaptation to environmental challenges”**

Chairs: Valérie SIMONNEAUX (*Strasbourg, France*) & Khalid EL ALLALI (*Rabat, Morocco*)

**RISSANI ROOM**

**Etienne CHALLET** (*Strasbourg, France*): “Impact of metabolic challenges on brain clocks”

**Sakina MHAOUTY-KODJA** (*Paris, France*): “Neural effects of environmental doses of phthalates on reproductive behaviors”

**Valérie SIMONNEAUX** (*Strasbourg, France*): “Adaptation of reproduction to geophysical changes”

**Ali OUICHOU** (*Kenitra, Morocco*): “Melatonin: neuroprotective, antioxidant, antidepressant and anxiolytic activities”

**Hassan AINANI** (*Rabat, Morocco*): “Neuroendocrine pathways involved in the male induction of female ovulation in the dromedary camel (short communication)”

18:45-19:30

**PLENARY LECTURE # 6**

**RISSANI ROOM**

**Khalid EL ALLALI** (*Rabat, Morocco*): “Neurobiology of adaptations to desert biotope, lessons from camel and goat studies”

20:30

**SOCIAL DINNER**

Thursday, June 27<sup>th</sup> 2019

08:00-08:45

PLENARY LECTURE # 7

RISSANI ROOM

Hagai BERGMAN (*Jerusalem, Israel*): "Computational physiology of the basal ganglia, theory and practice"

08:50-10:50

SYMPOSIA 60-63

**S60: "Brain ischemia: from pathophysiology to treatment opportunities"**

Chair: Omar TOUZANI (*Caen, France*)

ORANGERS ROOM

Omar TOUZANI (*Caen, France*): "Multimodal neuroimaging in stroke"

Anna PLANAS (*Barcelona, Spain*): "Inflammation in brain ischemia"

Maria-Grazia DE SIMONI (*Milan, Italy*): "New horizons in neuroprotection after cerebral ischemia"

Ramez MOUSTAFA (*Cairo, Egypt*): "Thrombolysis and thrombectomy in the treatment of stroke"

**S61: "Insights into early cellular dysfunctions leading to synucleinopathies"**

Chairs: Graziella CAPPELLETTI (*Milano, Italy*) & Antonella SCORZIELLO (*Napoli, Italy*)

TINMEL ROOM

Tiago OUTEIRO (*Göttingen, Germany*): "Deciphering the role of posttranslational modifications on  $\alpha$ -synuclein aggregation and toxicity"

Abid OUESLATI (*Quebec, Canada*): "New cellular and animal models to study the role of  $\alpha$ -synuclein in the pathogenesis of synucleinopathies"

Antonella SCORZIELLO (*Naples, Italy*): "Mitochondrial dysfunction in cellular and animal models mimicking Parkinson's disease"

Graziella CAPPELLETTI (*Milan, Italy*): "The interplay between  $\alpha$ -synuclein and tubulin/microtubules in health and disease: from pure protein to human brain"

**Arianna BELLUCCI** (*Brescia, Italy*): “Novel players in alpha-synuclein-mediated synaptic damage: can we try system reboot in neurodegenerative synucleinopathies”

**S62: “Implications of redox system functions in CNS pathogenesis”**

**Chairs:** **Amira ZAKY** (*Alexandria, Egypt*) & **Youssef ANOUAR** (*Mont-Saint-Aignan, France*)

**TICHKA ROOM**

**Gianluca TELL** (*Udine, Italy*): “Non-canonical roles of the DNA repair enzyme APE1 in redox regulation of gene expression”

**Ahmad R. BASSIOUNY** (*Alexandria, Egypt*): “oxidative stress, mitochondrial dysfunction and cellular stress response in neurodegenerative diseases”

**Muralidhar L. HEGDE** (*Houston, USA*): “New mechanisms of neurotoxicity of hemin and iron in stroke: Nanoengineering based targeted therapy”

**Amira ZAKY** (*Alexandria, Egypt*): “The Redox-sensitive APE1 is a global cellular regulator for microRNAs levels”

**Loubna BOUKHZAR** (*Mont-Saint-Aignan, France*): “Identification of Selenoprotein T as a therapeutic target in Parkinson’s disease”

**S63: “Melatonin and the circadian system: Keys for health (Part 1: fundamental approaches)”**

**Chairs:** **Paul PEVET** (*France*) & **Nouria LAKHDAR-GHAZAL** (*Rabat, Morocco*)

**ORANGERS ROOM**

**R.M. BUIJS** (*Mexico City, Mexico*): “The SCN, the central player in the multi-oscillatory circadian system”

**H. PIGGINS** (*Manchester, United Kingdom*): “Contributions of the lateral habenula in the circadian timekeeping”

**Paul PÉVET** (*Strasbourg, France*): “The hormone melatonin within the circadian system”

**M. P. FELDER-SCHMITTBUHL** (*Strasbourg, France*): “Circadian clocks, retinal health and visual function”

10:50-11:10      **COFFEE BREAK**

11:10-13:10 SYMPOSIA 64-67

**S64: “Neurobiology of individual differences in human memory performance”**

Chairs: Valerio SANTANGELO (*Perugia, Italy*) & Martin DRESLER (*Nijmegen, Netherlands*)

**RISSANI ROOM**

**Roberto CABEZA** (*Durham, USA*): “Functional neuroimaging of episodic memory”

**Heidi BONNICI** (*Norwich, United Kingdom*): “The role of the angular gyrus in autobiographical memory”

**Boris NIKOLAI KONRAD** (*Nijmegen, The Netherlands*): “Characteristics and functional neuroimaging of memory champions”.

**Valerio SANTANGELO** (*Perugia, Italy*): “Functional neuroimaging of highly superior autobiographical memory”

**S65 “The claustrum: development, evolution, structure, function and pathology”**

Chair: Ami CITRI (*Jerusalem, Israel*)

**TINMEL ROOM**

**Luis PUELLES** (*Murcia, Spain*): “Claustrum development and evolution”

**Ami CITRI** (*Jerusalem, Israel*): “Claustro-cortical circuits in attention and reinforcement”

**Pierre-Hervé LUPPI** (*Lyon, France*): “The role of the claustrum in REM sleep”

**José M. DELGADO-GARCÍA** (*Seville, Spain*): “The role of claustral neurons in the acquisition of associative learning tasks”

**Stefano MELETTI** (*Modena, Italy*): “The role of the claustrum in epileptogenesis: clinical evidence”

**S66: “Non-motor symptoms in Parkinson’s disease: neurobiological insights from animal models and patients”**

Chair: Raffaella TONINI (*Genoa, Italy*)

**TICHKA ROOM**

**Rosario MORATALLA** (*Madrid, Spain*): “Synaptic plasticity in striatal projection neurons: cross-talk between D1 and D2 dopamine receptors”

**Gilad SILBERBERG** (*Stockholm, Sweden*): “Sensory impairments in Parkinson’s disease”

**Gilberto FISONE** (*Stockholm, Sweden*): "A model of cognitive deficit and circadian rhythm disruption in Parkinson's disease: identification of therapeutic targets"

**Véronique SGAMBATO** (*Bron, France*): "Role of the serotonergic system in non-motor symptoms of Parkinson's disease"

**Pierre-Olivier FERNAGUT** (*Poitiers, France*): "Unravelling mechanisms of non-motor side effects of dopamine replacement therapy in Parkinson's disease"

**S67: "Melatonin and the circadian system: Keys for health (Part 2: Pre-clinical and clinical approaches)"**

Chair: Paul PEVET (*France*) & Nouria LAKHDAR-GHAZAL (*Rabat, Morocco*)

**ORANGERS ROOM**

**Jose CIPOLLA-NETO** (*Sao Paulo, Brazil*): "Melatonin: new physiological and clinical insights"

**Gabriella GOBBI** (*Montreal, Canada*): "Drugs for insomnia beyond benzodiazepines"

**Carolina ESCOBAR** (*Mexico City, Mexico*): "Shift-work: is time of eating determining metabolic health? Evidence from animal models"

**Amal SATTE** (*Rabat, Morocco*): "Circadian sleep architecture in normal and pathological conditions"

**Roberto PAGANELLI** (*Chieti, Italy*): "Biological clocks: their relevance to immune-allergic diseases"

13:15-14:15      **Lunch**

14:20-16:20      **SYMPOSIA 68-71**

**S68: "Stressful life experiences don't have the same impact on all the individuals: focus on the clinical and biological signatures underlying vulnerability and resilience and its transmission"**

Chair: Annamaria CATTANEO (*London, United Kingdom*)

**RISSANI ROOM**

**Bruno ETAIN** (*Paris, France*): "Intergenerational continuity of childhood trauma in families with bipolar disorders"

**Monica AAS** (*Oslo, Norway*): "Childhood trauma and structural and functional brain mechanisms linked to psychopathology"

**Annamaria CATTANEO** (*London, United Kingdom*): "Stressful life events during neurodevelopment and epigenetics: identification of the molecular mechanisms, brain pathways and peripheral biomarkers associated with vulnerability or resilience for psychopathology"

**Katri RAIKKONEN** (*Helsinki, Finland*): "Childhood mental disorders: prenatal environment and familial risk factors"

**Jari LAHTI** (*Helsinki, Finland*): "Interplay between early life adversities and glucocorticoid responsive genes on mental and metabolic health"

### **S69: "Drug addiction: mechanisms underlying reward and aversion"**

Chair: **Rami YAKA** (*Jerusalem, Israel*)

#### **TINMEL ROOM**

**Miriam MELIS** (*Cagliari, Italy*): "Predictive endophenotypes of vulnerability to drugs of abuse"

**Yonathan KUPTCHIK** (*Jerusalem, Israel*): "Abnormal dynorphin regulation of GABA transmission following cocaine withdrawal"

**Ana João RODRIGUES** (*Braga, Portugal*): "Nucleus accumbens circuits involved in reward and aversion"

**Rami YAKA** (*Jerusalem, Israel*): "Input-specificity of GABAergic projections to the VTA govern cocaine conditioned reward"

**François GEORGES** (*Bordeaux, France*): "Locus coeruleus activation during novelty exposure gates cocaine-induced plasticity in dopamine"

### **S70: "Therapeutic strategies in Parkinsonism: the importance of Neuroinflammation and Aging"**

Chair: **Maria Trinidad HERRERO EZQUERRO** (*Murcia, Spain*)

#### **TICHKA ROOM**

**Egle DE STEFANO** (*Rome, Italy*): "Metalloproteinases in Parkinsonism and aging: friends or foes?"

**Maria-Trinidad HERRERO** (*Murcia, Spain*): "Synergy of aging and neuroinflammation in neurodegenerative diseases"

Rita RAISMAN-VOZARI (*Paris, France*): “Old drugs for new treatments in elderly Parkinsonian patients”

Mercé PALLÀS LLIBERIA (*Barcelona, Spain*): “Senescence accelerated mice prone 8: an experimental tool for novel drug discovery in neurodegenerative diseases”

**S71: “Neuromodulation for neurological disorders: advances in on-demand stimulation and network specific modulation”**

Chair: Ali JAHANSHAH (*Maastricht, The Netherlands*)

**ORANGERS ROOM**

Hagai BERGMAN (*Jerusalem, Israel*): “Long beta episodes and closed-loop DBS therapy for movement disorders”

Abdelhamid BENZAOUZ (*Bordeaux, France*): “STN DBS and non-motor symptoms of Parkinson's disease”

Sarah HESCHAM (*Maastricht, The Netherlands*): “Magnetothermal deep brain stimulation in freely moving mice”

Marcus JANSSEN (*Maastricht, The Netherlands*): “Deep brain stimulation for tinnitus: current evidence and future perspective”

Ali JAHANSHAH (*Maastricht, The Netherlands*): “Neurotransmitter homeostasis in deep brain stimulation”

16:20-16:40      **COFFEE BREAK**

16:40-18:00      **ORAL COMMUNICATIONS SESSION # 2**

18:00-19:15      **POSTER SESSION # 3**

19:20-20:00      **AWARDS – TRAVEL GRANTS TO YOUNG RESEARCHERS – CONCLUSIONS**

**RISSANI ROOM**