

Friday - October 1st Afternoon session

5.00 – 5.10 Welcome

Molecular determinants of mGluRs

Chair: J.P. Pin, J. Monn

5.10 – 5.35

Allosteric regulation of mGluR2 fast structural dynamics and activation

E. Margeat

5.35 – 6.00

Mechanisms of transactivation in metabotropic glutamate receptor heteromers

J. Javitch

6.00 – 6.25

Nanobodies to investigate the endogenous mGlu receptors

P. Rondard

6.25 – 6.50

Structure basis of homo and hetero metabotropic glutamate receptors

J. Liu

6.50 – 7.15 TBD **J. Levitz**

7.15- 7.40 TBD **B. Kobilka**

7.40 – 8.05 TBD **G. Skiniotis**

Saturday - October 2nd Morning session

Regulation of neural circuit development and synaptic plasticity through mGluR signaling

Chair: M. Kano, M. Watanabe

8.00- 8.25

Regulation of hippocampal synaptic plasticity by mGluRs **J. R. Mellor**

8.25 – 8.50

LTP and LTP of electrical synapses mediated by mGluR signaling **C. E. Landisman**

8.50 – 9.15

mGluR1-dependent neural circuit refinement in the developing cerebellum **M. Kano** *on line*

9.15 – 9.40

mGluR1 is required for strengthening of “winner” and elimination of “loser” climbing fiber synapses in the cerebellum **M. Yamasaki** *on line*

9.40- 10.05 coffee break

10.05-10.30

Regulation of mGluR1 trafficking and synaptic plasticity in cerebellar Purkinje cells
Y. Shen *on line*

10.30 – 10.55

PF synapse elimination mediated by Ca²⁺-rising mechanisms in cerebellar Purkinje cells
M. Watanabe *on line*

mGlu receptors and Melanoma

10.55 – 11.15

Translational application of mouse models of melanoma.
S. Chen

11.15. 12.00

Educational: “Publishing workshops”
Y. Smith

Saturday - October 2nd Afternoon session

mGluRs and synaptic plasticity

Chair: **R. Nisticò, Z. Bashir**

2.00 – 2.25

Role of kainate receptors in psychiatric comorbidities. **J. Llerma**

2.25 – 2.50

Progressive alterations in glutamate receptor expression and hippocampal function in congenital forms of sensory deficits.

D. Manahan Vaughan

2.50 – 3.15 TBD **Z. Bashir**

3.15 – 3.40

Pre and postsynaptic expression mechanisms in mGluR-LTD **T. Sanderson**

3.40 – 4.05 **Henley**

4.05 -4.30

Using the ARCKR mouse to explore the roles of Arc in plasticity

M. Wall

4.30 – 4.45 **Coffee break**

Therapeutic implications of mGlu regulation of limbic and forebrain function

Chair: **J. Conn, A. Guidotti**

4.45 – 5.05 **J. Ster**

5.05 – 5.30 **V. Bruno/G. Mascio**

5.30 – 5.55

mGlu3 receptor as an emerging target for the treatment of schizophrenia **S. Dogra**

5.55 – 6.20 **J. Gonzalez Maeso** *on line*

6.20 – 6.45

Genomics of glutamate signaling: damaging variant discovery using Whole Exome Sequencing and its application in psychiatry and neurology.

A. Baskys

6.45- 7.10

Regulation of glutamatergic activity by bidirectional activation of two selected receptors as a novel approach in antipsychotic drug discovery

J. Wieronska

7.10 – 7.35

Autistic traits induced by postnatal subconvulsive activity are associated with loss of NeuN antigenicity and polyphosphoinositide hydrolysis within selective limbic structures of juvenile rats.

Friedman, L.K. Kahen, B.A, Di Menna, L, Nicoletti, F. Veliskova, J.

Sunday - October 3rd Morning session

mGlu 5 Receptor in ASD, autoimmune encephalopathy, melanoma

Chair: A. Aiba, B.K. Kaang

7.45 – 8.05

Atypical molecular dynamics at synapses in autism spectrum disorder

J. Perroy

8.05 – 8.30

mGlu5 receptor signaling alteration in Phelan McDermid syndrome

C. Verpelli

8.30 – 8.55

Sex specific, mGluR5-dependent hyperexcitability of sensory neocortical circuits in a mouse model of PTEN deficiency

G. Molinaro

8.55 – 9.20

The activation of mGlu4 receptors rescues parallel fiber LTP and motor deficits in a mouse model of fragile X syndrome

J. Sanchez-Prieto

9.20 – 9.45

Generation of a non-human primate model for fragile X syndrome

A. Aiba *on line*

9.45 – 10.10 Coffee break

Functional anatomy

Chair: F. Ferraguti, J. Bockaert

10.10 – 10.35

Neural circuits mediating the influence of mGlu5 receptors on anxiety-like behaviour

F. Ferraguti

10.35 – 11.05

D. Choquet

11.05 – 11.30

Metabotropic glutamate receptors at ribbon synapses in retina and cochlea

R. Enz

11.30 – 11.55

Nanoscale co-organization and co-activation of AMPAR, NMDAR and mGluR at excitatory synapses

E. Hossy

Sunday - October 3rd Afternoon session

Optopharmacology of mGluRs

Chair: A. Llebaria, E. Isacoff

2.00 – 2.25 TBD

A. Llebaria

2.25 – 2.50

Optical analysis of mGluR activation in intact cells

M. Lohse

2.50 – 3.15

smFRET reveals subunit interactions that regulate mGluR conformational dynamics and ligand potency

E. Isacoff

3.15 – 3.40

Photopharmacological manipulation of pain

C. Goudet

3.40 – 3.55 Coffee break

mGlu and drug addiction

Chair: A. Badiani

3.55 – 4.20

The role of mGluRs in the tetrapartite synaptic plasticity underpinning cued-induced heroin seeking

P. Kalivas

4.20 – 4.45 TBD

F. Gasparini

4.45 – 5.10

Effect of social choice-induced voluntary abstinence on incubation of methamphetamine craving and AMPAR receptor expression in nucleus accumbent core

D. Caprioli

Monday - October 4th Morning session

Drug discovery

Chair: **C. Lindsley**

8.30 – 8.55

New Advances with Group III mGlu PAMs and NAMs

C. Lindsley

8.55 – 9.20

Evaluating mGlu1 PAMs for the treatment of schizophrenia

D. Luessen

9.20 – 9.45

Chemistry of novel mGlu5 NAM

J.P. Rocher

9.45 – 10.10

Development of mGlu5 NAM

R. Lutjens

10.10 – 10.35

Photocatalysis in Central Nervous System Drug Discovery: Direct Access to 1-Alkyl Isoquinolines as Potent mGluR₄ PAMs

AM Bender

10.35 – 11.00 Coffee break

Cortico-thalamic network and sleep regulation

Chair: **T. Salt, R. Ngomba**

11.00 – 11.25

Modulation of Cortical Neuronal Circuit Oscillations by mGlu Receptors

T. Salt

11.25 – 11.50

Metabotropic glutamate receptor 2 regulates thalamically-driven dopamine release and reinforcement learning

K. Johnson

11.50 – 12.15

REM sleep disorders

L Ferini Strambi

12.15 – 12.40

Group II mGluRs in sleep-wake architecture and network oscillations

C. Wood

Monday - October 4th Afternoon session

mGluRs and pain

Chair: M. Zhuo, V. Neugebauer

14.30 – 14.55

Calcium-dependent synaptic plasticity in the cortex and their roles in chronic pain and emotion

M. Zhuo

14.55 – 15.20

Differential roles of mGluR2 and mGluR3 in the amygdala in pain modulation

V. Neugebauer

15.20 – 15.45 TBD

S. Notartomaso

15.45- 16.10

Potential role of the cinnabaric acid in neuropathic pain

L. Luongo

16.10 – 10.30 Coffee break

16.30 – 16.55 TBD

R. Liguori

16.55 – 17.20

mGlu2/3-5HT2A receptor-receptor interaction: a new therapeutic target for neuropathic pain

A. Pittaluga

17.20 – 17.45

Emerging trends in pain from central and peripheral neuroinflammation

S. Cuzzocrea

Tuesday - October 5th Morning session

mGluR7 in physiology and pathology

Chair: C. Niswender, P. Flor

8.-00 – 8.25

mGlu7 in neurodevelopmental disorders

C. Niswender/R. Gogliotti

8.25- 8.50

Phenotypic characterization of *GRM7* related disease: a clinical perspective.

A. Al-Hashim

8.50 – 9.15

Latest news on the mGlu7 receptor in epilepsy

F. Bertaso

9.15 – 9.40

Constitutive activation of mGluR7 by Efn1 regulates synaptic properties onto interneurons

T. Stachniak

9.40 – 10.05 Coffee break

10.05 – 10.30

mGlu7 ligands binding to the extracellular domain

F. Acher

10.30 – 10.55

The dual role of mGluR7 in controlling pain and beyond

E. Palazzo

10.55 – 11.20

Metabotropic glutamate receptor subtype 7, a target for the treatment of anxiety and stress disorders

P. Flor

11.20 – 11.45

Life outside of the cell: transsynaptic regulation of group III mGluRs

K. Martemyanov

Tuesday - October 5th Afternoon session

New targets for the treatment of Alzheimer's disease and Parkinson's disease and how to improve the management of chronicities

Chair: M. A. Cenci, Y. Smith

2.30 – 2.55

Neuroprotective Role of mGluRs in Parkinson's Disease

Y. Smith

2.55 – 3.20 Multiscale 3D method for detection and quantification of neurodegeneration in mouse models of Alzheimer's disease

G. Battaglia

3.20 – 3.45 TBD

M. A. Cenci

3.45 – 4.10

mGluR in neuroinflammation in animal model of Parkinson's disease and levodopa-induced dyskinesias

T. Di Paolo

4.10 – 4.30 Coffee break

4.30 – 4.55

The mGluR₅-D₂R-A_{2A}R heteromeric complex: considerations for Parkinson's disease treatment

F. Ciruela

4.55 – 5.20

Novel insights in Methamphetamine toxicity

F. Fornai

5.20 – 5.45

Sex-specific beta-amyloid mGluR5 signalling in AD mice

S. Ferguson

Targeting mGluRs in neuroinflammation associated with developmental disorders, autoimmune disorders (multiple sclerosis, NMOSD), and brain trauma

Chair: O. Baud

5.45 – 6.10

Vulnerability of the developing brain: role of inflammation and excitotoxicity

O. Baud

6.10 – 6.35

mGlu3 receptor regulates microglial cell reactivity in neonatal rats

J. Mairesse/ M. Zinni

6.35 – 7.00

Role of mGluRs in posttraumatic neuroinflammation and neurodegeneration after traumatic brain injury

A. Faden

Wednesday - October 6th Morning session

Molecular targets for stroke recovery

Chair: **A. Copani, K. Reymann**

8.00 – 8.25 TBD

T. Wieloch

8.25 – 8.50

The GABAA receptor as target for restorative ischemic stroke treatment: Insights from preclinical and clinical studies

D. Hermann

8.50 – 9.15 TBD

D. Pellegrini Giampietro

9.15 – 9.40

Receptor-receptor interaction between mGluR1 and NMDARs as potential target for treating stroke

F. Liu

9.40 – 10.05 Coffee break

Resilience to stress and epigenetics

In memory of Prof. Bruce McEwen

Chair : **F. Caraci, M.V. Catania**

10.05 – 10.30

Epigenetic modulation of glutamatergic function: revisiting the crosstalk between mitochondria and cell nuclei

C. Nasca *on line*

10.30 – 10.55

Role of CNS and peripheral insulin resistance in mood and cognitive disorders

N. Rasgon

10.55 – 11.20

Glutamatergic function in treatment-resistant depression

N. Schatzberg

11.20 – 11.45

Longitudinal dissection of the stress response: a matter of resilience or vulnerability

M. Popoli

11.45 – 12.10

Maternal stress and behavior at the core of the offspring neurodevelopmental programming in both sexes:
focus on Group II mGlu receptors

S. Maccari

12.10 – 12.35

Stress reorganizes prefrontal cortex circuits by hijacking mGlu receptor plasticity

M. Joffe

Wednesday - October 6th Afternoon session

Treatment of major depression and schizophrenia

Chair : **A. Pilc, S. Chaki** *on line*

3.00 – 3.25

Sex differences in ketamine's antidepressant and addictive properties

M. Kabbaj

3.25 – 3.50

Convergent mechanism between the antidepressant actions of ketamine and mGluR₂ signaling pathways

P. Zanos

3.50 – 4.15

On the enhancement of antidepressant-like efficacy of cholinergic or serotonergic receptor ligands
by substances acting on mGlu receptors

A. Pilc

4.15 – 4.40 Coffee break

4.40 – 5.05

Safety and Pharmacokinetic Profiles of (1) TP0473292 (TS-161), Novel Orthosteric mGlu2/3 Receptor Antagonist Prodrug, and (2) MGS0274 Besylate (TS-134), a Novel mGlu2/3 Receptor Agonist Prodrug, in Healthy Subjects

M. Watanabe

5.05 – 5.30

Clinical Efficacy and Target Engagement of Glutamatergic Drugs: Placebo-Controlled RCTs of Pomaglumetad and TS-134 for Reversal of Ketamine-Induced Psychotic Symptoms and PharmacobOLD in Healthy Volunteers

J. Kantrowitz

5.30 – 5.55 TBD

A. Der Avakian

5.55 – 6.20 TBD

D. Sheffler