



6<sup>th</sup> INTERNATIONAL  
MEETING ON  
METABOTROPIC  
GLUTAMATE  
RECEPTORS

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GLUTAMATE RECEPTORS

Taormina, Sicily-Italy, September 14-19, 2008

Patronized by I.N.M. Neuromed - Pozzilli

Final Program

*Dedicated to Pindar*

*P*indar was a Boeotian, of a country not rich in literary or indeed any kind of intellectual eminence, yet by no means to be ignored in an estimate of the Hellenic race. Politically indeed it only rises into pre-eminence under Epameinondas; before and afterwards Boeotian policy under the domination of Thebes is seldom either beneficent or glorious: it must be remembered, however, that the gallant Plataeans also were Boeotians. The people of Boeotia seem to have had generally an easy, rather sensually inclined nature, which accorded with their rich country and absence of nautical and commercial enterprise and excitement, but in their best men this disposition remains only in the form of a genial simplicity. Pelopidas in political, and Plutarch and Pausanias in literary history, will be allowed to be instances of this. That the poetry which penetrated Hellenic life was not wanting in Boeotia we have proof enough in the existence of the Sacred Band, that goodly fellowship of friends which seems to have united what Hallam has called the three strongest motives to enthusiastic action that have appeared in history, patriotism, chivalric honour, and religion. Nor is there any nobler figure in history than that of Epameinondas.

One fact indeed there is which must always make the thought of Pindar's Theban citizenship painful to us, and that is the shameful

part taken by Thebes in the Persian war, when compulsion of her exposed situation, and oligarchical cabal within her walls, drew her into unholy alliance with the barbarian invader. Had it been otherwise how passionately pure would Pindar's joy have uttered itself when the 'stone of Tantalos' that hung over the head of Hellas was smitten into dust in that greatest crisis of the fortunes of humanity. He exults nobly as it is, he does all honour to Athens, 'bulwark of Hellas,' but the shame of his own city, his 'mother' Thebes, must have caused him a pang as bitter as a great soul has ever borne.

For his very calling of song-writer to all Hellenic states without discrimination, especially when the songs he had to write were of the class which we still possess, triumphal odes for victories in those great games which drew to them all men of Hellenic blood at the feet of common deities, and which with each recurring festival could even hush the clamour of war in an imperious Truce of God—such a calling and such associations must have cherished in him the passion for Panhellenic brotherhood and unanimity, even had there not been much else both within and without him to join to the same generous end. It was the time when Panhellenic feeling was probably stronger than ever before or after. Before, the states had been occupied in building up their own polities independently; the Hellenic activity had been dispersing itself centrifugally among the trans-marine colonies, and those of Italy and Sicily seemed at one time to make it doubtful whether the nucleus of civilization were to be there or in the mother-country. But by the time of the Persian war the best energies of the race had concentrated themselves between the Aegean and Ionian seas; and the supreme danger of the war had bound the states together against the common enemy and taught them to forget smaller differences in the great strife between Hellene and barbarian. Yet again when that supreme danger was past the old quarrels arose anew more deadly and more complicated: instead of a Persian there was a Peloponnesian war, and the Peloponnesian war in its latter stages came, by virtue of the political principles involved, to partake much of the character of a civil war. But the time of Pindar, of Aeschylus, of Sophocles, of Pheidias, of Polygnotos, was that happy interval when Hellas had beaten off the barbarian from her throat and had not yet murdered herself. And Pindar's imagination and generosity were both kindled by the moment; there was no room in his mind for border squabbles, for commercial jealousies, for oligarchic or democratic envy: these things were overridden by a sentiment of nationality wanting indeed in many circumstances which modern nationalities deem essential to the existence of such sentiment, and many of which are really essential to its permanence—yet a sentiment which no other nation ever before or since can have possessed in the peculiar lustre which it then wore in Hellas; for no other nation has ever before or since known what it was to stand alone immeasurably advanced at the head of the civilization of the world.

## SCIENTIFIC SECRETARIAT

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## ORGANIZING SECRETARIAT



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## ORGANIZING COMMITTEE

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V. BRUNO (ITALY)  
P.L. CANONICO (ITALY)  
P.J. CONN ( U.S.A.)  
F. FERRAGUTI (AUSTRIA)  
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## CONFERENCE CENTRE

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## GENERAL INFORMATIONS

### REGISTRATION FEES

Participants	900,00
Students*	500,00
Accompanying person	500,00

\*verification of student status required

#### *Registration fees includes:*

#### **Participant and students:**

Access to all scientific session; congress kit; abstract book; welcome cocktail; coffee breaks; working lunches; social program and local transportation.

#### **Accompanying person:**

welcome cocktail, working lunches, social program and local transportation  
he registration fee does not include the insurance of participants against personal accidents, sickness, theft or property damage.

### SHUTTLE BUS SERVICE

Participants are kindly requested to communicate the time of their departure to the organizing secretariat "Centro Organizzazione Congressi"

### SCIENTIFIC INFORMATION

#### **Projections**

- Oral presentations must be prepared in Power Point format
- Speakers are strongly recommended to save their presentations on a pen drive.
- Speakers with their presentations on personal laptop are kindly requested to go to the Multimedia Slide centre
- We kindly recommended speakers to contact the Multimedia Slide centre the day before their presentation

#### **Poster session**

- Poster can be positioned Thursday September 18 from 8.00 0 to 8.30 a.m.
- The poster board will be 100 cm (39,4 inches) wide and 140 cm (56,2 inches) high.

#### **CME (Continuing Medical Education)**

Request for CME accreditation has been submitted to the Ministry of Health for the categories:

- Neurology
- Psychiatry
- Neurophysiology

## SOCIAL PROGRAM

**Sunday, September 14**

Grande Albergo Capotaormina:

Welcome Buffet

**Monday, September 15**

*Taormina, Piazza del Carmine  
Greek Theatre in Taormina*

Dinner

Piano concerto by Maestro Giovanni Cultreza  
Opera collection by tenor Maestro Giuseppe  
Giacomini accompanied by Maestro Sebastiano  
Spina

**Tuesday, September 16**

*Grande Albergo Capotaormina*

Social dinner

Music and dancing with: Leonardo Marino and  
Emiliana Perina

**Wednesday, September 17**

*Taormina's Gardens*

Sicilian dinner

Music and dancing with Leonardo Marino and  
Emiliana Perina

Animation with: Lia Fiducia

“Tribute to the 5 continents”

“mGlu Défilé” by Francesca and Vedran

**Thursday, September 18**

*Grande Albergo Capotaormina*

“White party” at the Capotaormina beach with  
music (total white dresses kindly required)

## SCIENTIFIC PROGRAM

### Sunday , September 14

5.00-5.10 p.m. *Welcome*

**SYMPOSIUM MOLECULAR FUNCTIONING AND REGULATION OF mGlu-LIKE RECEPTORS**

Chair: **S. Nakanishi** (Japan) and **J.P. Pin** (France)

5.10-5-35 p.m. Oligomeric state and activation mechanism of class C GPCRs  
**J.P.Pin** (France)

5.35-6.00 p.m. Structure of the extracellular domains of class C GPCRs  
**H. Jingami** (Japan)

6.00-6.25 p.m. Using Sweet and Umami Taste Receptors to Discover Taste Enhancers  
**M. Zoller** (USA)

6.25-6.50 p.m. Regulation of GABAB receptors by extracellular proteins and phosphorylation  
*J.Y. Tiao, A. Bradaia, A. Jensen, B. Biermann, H. Bräuner-Osborne, M. Müller, K. Kaupmann, M. Gassmann and B. Bettler* (Switzerland and Denmark)

6.50-7.15 p.m. Biased agonism in class C GPCRs: a hint from a rare disease  
*N. Makita* and **T. Iiri** (Japan)

7.15-7.40 p.m. Function and signaling mechanism of the mGluR-interacting scaffold tamalin  
**S. Nakanishi** (Japan)

7.40- 8.05 p.m. Regulation of mGluR signaling by endogenous Homer proteins  
**P. Kammermaier** (USA)

*Welcome buffet at Grand Hotel Capotaormina*

## Morning session

### Monday, September 15

#### SYMPOSIUM FUNCTIONAL ANATOMY OF mGlu RECEPTORS

Chairpersons: **F. Ferraguti** (Austria) and **R. Shigemoto** (Japan)

- 8.00-8.25 a.m. Topographical specificity of mGlu1 receptors at glutamatergic and GABAergic synapses  
**F. Ferraguti**, *Y. Kasugai, Y. Fukazawa, W.A. Kaufmann, P. Scheiffle, M. Watanabe, R. Shigemoto* (Austria, Japan and USA)
- 8.25-8.50 a.m. Left-right asymmetry of hippocampal pyramidal cell synapses  
**R. Shigemoto** (Japan)
- 8.50-9.15 a.m. Cell identification based on mGluR expression predicts the timing and spacing of GABA action in the hippocampal neuronal network  
**P. Somogyi** (UK)
- 9.15-9.40 a.m. Functional roles of Group III mGluRs in the amygdala  
*H.R. Olpe, J. Mosbacher, H. van der Putten, K. McAllister, C.E. Gee* (Switzerland)
- 9.40-10.05 a.m. *Coffee break*
- 10.05-10.30 a.m. Pre-synaptic Metabotropic Glutamate Receptors in the Striatum  
**Y. Smith** and *L. Ishkakova* (USA)
- 10.30- 10.55 a.m. DHPG induced high frequency oscillations in cerebellar cortex in vivo  
*S. J. Middleton, M. A. Whittington, R. D. Traub, A. Perron* and **T. Knöpfel** (Japan, UK and USA)
- 10.55- 11.20 a.m. Congenital stationary night blindness due to a trafficking defect of the metabotropic glutamate receptor 6  
**C. Zeitz** (Switzerland)
- 11.20-11.45 a.m. Effects of mGluR compounds on the electroretinogram  
**R.M. Duvoisin**, *B.G. Jeffrey, T.L. Haley., J. Gayet-Primo* (USA)
- 11.45- 12.10a.m. Phenotypic characterization of mGlu2 and mGlu3 knock-out mice unravels distinct physiological role for group II mGlu receptors  
*M. Corsi, V. Pavoni, L. Piccoli, S. Melotto, P. Gerrard, N. Singewald* and **C. Corti** (Italy and Austria)

*Working lunch*

## Afternoon session

### Monday , September 15

- SYMPOSIUM mGlu RECEPTORS IN SYNAPTIC PLASTICITY**  
Chairpersons: **Z. Bashir** (UK) and **G.L. Collingridge** (UK)
- 3.20-3.40p.m. Mechanisms of mGluR-LTD in the hippocampus  
**S. M Fitzjohn** (UK)
- 3.40-4.05p.m. Eukaryotic Elongation Factor 2 (eEF2) Controls the Dynamic Translation of Arc/Arg3.1 Essential for mGluR-dependent Synaptic Depression  
**P. Worley** (USA)
- 4.05-4.30p.m. Effect of allosteric modulation of group I mGluRs on spatial learning, hippocampal network activity and synaptic plasticity in the hippocampus in vivo  
**D. Manahan-Vaughan** (Germany)
- 4.30-4.55p.m. Persistent transcription- and translation-dependent long-term potentiation induced by mGluR1 in hippocampal interneurons.  
*I. Ran, I. Laplante, M. Costa-Mattioli, J. Pelletier, N. Sonenberg and J.C. Lacaille* (Canada)
- 4.55-5.20p.m. mGluR1-mediated long-lasting intrinsic plasticity in hippocampal CA3 pyramidal cells  
**A. Randall, J. Brown** (UK)
- 5.20-5.40 p.m. *Coffee break*  
Chairpersons: **G. L. Westbrook** (USA) and **P. Worley** (USA)
- 5.40-6.05 p.m. Signaling mechanisms in spike-timing dependent plasticity  
**T. Nevian** (Germany)
- 6.05-6.30p.m. mGluR7; A Fulcrum for State-Dependent Presynaptic Metaplasticity  
**C.J. McBain** (USA)
- 6.30-6.55p..m. Modulation of glutamate release by mGlu7 receptors: a balance between facilitation and inhibition  
**J. Sánchez-Prieto, D. Bartolomé-Martín, M. Torres and R. Martín** (Spain)
- 6.55-7.20.m. PICK uncoupling from mGluR7, causes absence-like seizures  
**J. Bockaert, F. Bertaso, C. Zhang, A. Scheschonka, F. de Bock, P. Fontanaud, P. Marin, R. Huganir, H. Betz, L. Fagni, M. Lerner-Natoli** (France, Germany and USA)

8.45-10.00 p.m. *Dinner in Taormina, Piazza del Carmine*

10.15-11.30 p.m. *Greek Theatre in Taormina*  
*Piano concerto by Maestro Giovanni Cultretra*  
*Opera collection by tenor Maestro Giuseppe Giacomini accompanied*  
*by Sebastiano Spina*

### **Morning session**

## **Tuesday, September 16**

**SYMPOSIUM mGlu RECEPTORS AND PAIN**  
Chairpersons: **A. Copani** (Italy) and **R. Gereau IV** (USA)

8.00-8.25a.m. Metabotropic Glutamate Receptor 5 (mGlu5) in Spinal Central Sensitization  
**R.W. Gereau, B.J. Alter, F. Karim, and H.J. Hu** (USA)

8.25-8.50a.m. Drug-induced mGlu2 receptor upregulation as a new therapeutic approach in persistent pain conditions: focus on histone deacetylase inhibitors.  
**S. Chiechio, M. Zammataro, F. Drago, M. E. Morales, R. W. Gereau IV, A. Copani, F. Nicoletti** (Italy and USA)

8.50-9.15a.m. Differential pain-related behavioral and electrophysiological effects of mGluR7 and mGluR8 agonists in the amygdale  
**V. Neugebauer** (USA)

9.15-9.40a.m. Facilitatory modulation of pain by activation of mGluRs in the anterior cingulate cortex of adult mice  
**M. Zhuo** (Canada)

9.40-10.05a.m. ADX10059, a negative allosteric modulator of mGluR5, demonstrates proof of concept for a role in the management of migraine, in a placebo controlled Phase2A study  
**C. Keywood and M. Wakefield** (Switzerland)

10.05-10.30a.m. *Coffee break*

**SYMPOSIUM mGlu RECEPTORS AND NEURODEVELOPMENT DISORDERS**  
Chairperson: **M. Bear** (USA) **M.V. Catania** (Italy)

10.30-10.55 a.m. The role of ATM (ataxia-telangiectasia mutated) in CNS function: beyond DNA breaks  
**K. Herrup** (USA)

- 10.55-11.20 a.m. The mGluR theory of fragile X: towards fulfilling the promise of molecular medicine  
*G. Dolen, E. Osterweil, B.S. Shankaranarayana Rao, G. B. Smith, B.D. Auerbach, S. Chattarji and M.F. Bear* (USA and India)
- 11.20-11.45 a.m. AMPA receptor mRNA Targeting to Dendrites and Its Dysregulation in Fragile X  
**S.Z. Zukin** (USA)
- 11.45-12.10 a.m. Molecular neuropathology and epileptogenesis of malformations of cortical development  
*K. Boer, Troost, J.A.Gorter and E. Aronica* (The Netherlands)
- Working lunch*

*Afternoon session*

**Tuesday, September 16**

**SYMPOSIUM DRUG DEVELOPMENT**

Chairpersons: **W. Danysz** (Germany) and **J. Monn** (USA)

- 3.30-3.50 p.m. Visualization and pharmacology of allosteric binding sites on metabotropic glutamate receptor 2 (mGluR2) in the rodent and primate brain using functional GTP $\gamma$ S and ligand binding autoradiography  
**L. Mrzljak** and *J. Doherty* (USA)
- 3.50-4.10 p.m. Longitudinal imaging of brain region-specific glucose metabolism in rats following acute and repeated administration of the mGluR 2,3 agonist LY379268  
**D. McKinzie**, *B. Gitter, J. Monn, W. Winkle, B. McCarthy, R. Wright, M. Fell, M. Messenger, M. O'Neill, G. Marek, G. Hutchins, P. Territo* (USA and UK)
- 4.10- 4.30 p.m. In vivo neurochemical and behavioral evidence for lack of direct dopamine D2 receptor mediated actions of mGluR2/3 agonists  
**K.A. Svansson**, *M.J. Fell, B.G. Johnson, K.W. Perry, J.F. Falcone, V.N. Barth, K.S. Rash, J.A. Monn, D.D. Schoepp, D.L. McKinzie, D.L. Nelson, G.J. Marek* (USA)
- 4.30- 4.50 p.m. Novel PET ligands for mGluR receptors  
**R. Hargreaves**, *H. Ohta, T. Kimura, G. Suzuki, S. Ozaki, S. Ito, H. Kawamoto, W. Eng, S. Sanabria, HD Burns, C. Sur and E Hostetler* (USA and Japan)
- 4.50- 5.10 p.m. *Coffee break*

- 5.10-5.30 p.m. Imaging of the mGlu5 Receptor. ABP688: Identification, Characterization and its use in Clinical Development  
**F. Gasparini**, Y.P. Auberson, G. Bilbe, A. Brülisauer, B. GomezMancilla, S. Hintermann, D. Hoyer, D. Johns, K.H. McAllister, T. Moenius, I. Vranesic, S. Whitebread (Switzerland)
- 5.30- 5.50 p.m. Translation imaging for mGluR5  
**P. Raboisson** and A.Z. Södertälje (Sweden)
- 5.50-.6.10 p.m. Allosteric modulators of metapotropic glutamate receptor subtype 5 as a novel approach for treatment of cns disorders  
**P. J. Conn**, A.L. Rodriguez, J.E. Ayala, C.K. Jones, R. Barrett, C. M. Niswender, C. D. Weaver, S. Jadhav, D. J. Sheffler, A. S. Hammond, R. Williams, S. Sharma, C. W. Lindsley (USA)
- 6.10- 6.30 p.m. Metabotropic Glutamate Receptors 1 and 5: New Subtype Selective Positive and Negative Allosteric Modulators designed using Pharmacophore Models, Library Design and Homology Modelling.  
**U. Meyer**, S. Derksen, S. Müller, C. Jatzke, M. Hechenberger, C. Parsons, T. Weil (Germany).
- 6.30-6.50 p.m. Challenges in the development of mGluR allosteric ligands: Medicinal chemistry strategies to address confounding structure-activity-relationships  
**C.W. Lindsley** (USA)
- 6.50-7.10 p.m. A novel series of potent agonists of group-III metabotropic glutamate receptors  
**F. Acher**, C. Selvam, N. Oueslati, N. Triballeau, C. Goudet, H.-O. Bertrand, J.-P. Pin (France)
- 8.30-10.30p.m. *Social dinner at the Capotaormina Hotel*
- 10.30 p.m. *Music and dancing with: Leonardo Marino and Emiliana Perina*

*Morning session*

**Wednesday, September 17**

**SYMPOSIUM NOVEL THERAPEUTICS TARGETS FOR mGlu RECEPTORS**

Chairpersons: **M. Bennet** (USA) and **S. Chen** (USA)

- 8.00-8.25 a.m. A single-blind, placebo-controlled, proof of concept study of the effect of the mGluR5 negative allosteric modulator, ADX10059, on 24 hour esophageal pH and clinical symptoms, in patients with gastro-esophageal reflux disease (GERD).  
**C. Keywood** and *M. Wakefield* (Switzerland)
- 8.25-8.50 0 a.m. Metabotropic glutamate receptors (mGluRs) and cellular transformation  
*S. S. Shin, J. J. Martino*, and **S. Chen** (USA)
- 8.50-9.15 a.m. Role of Metabotropic Glutamate receptor 1 in cell survival and proliferation  
*S. Pshenichkin, E. Grajkowska, G.R.Takoudjou, A.C. Emery*,  
**J.T Wroblewski** (USA)
- 9.15-9.40 a.m. mGlu3 metabotropic glutamate receptors regulate the tumorigenic potential of glioma-initiating-cells  
*C. Ciceroni, A. Arcella, P. Mosillo, G. Battaglia, E. Mastrantoni, M. A. Oliva, G. Carpinelli, F. Santoro, P. Sale, L. Ricci-Vitiani, R. Pallini, F. Giangaspero, F. Nicoletti* and **D. Melchiorri** (Italy)
- 9.40-10.05 a.m. Potential interplay of glutamate and tryptophan in immunoregulatory signaling  
**U. Grohmann**, *F. Nicoletti, M.C. Fioretti* and *R. Di Marco* (Italy)
- 10.05-10.30 a.m. *Coffee break*

**SYMPOSIUM mGlu RECEPTORS AND ENDOCANNABINOIDS**

Chairpersons: **M. Kano** (Japan) and **J. Bockaert** (France)

- 10.30-10.55 a.m. Endocannabinoid-mediated retrograde synaptic modulation triggered by activation of group I mGluRs  
**M. Kano** (Japan)
- 10.55-11.20 a.m. Coordinated molecular organization of 2-arachidonoyl glycerol-mediated endocannabinoid signaling triggered by mGluR activation  
**M. Watanabe** (Japan)
- 11.20 -11.45 a.m. Metabotropic glutamate receptors and endocannabinoids in modulating inhibitory synaptic transmission in the CA1 hippocampal area  
**G. Mannaioni** (Italy)

- 11.45-12.05 p.m. Periaqueductal grey analgesic tolerance to cannabinoids in CCI neuropathic rats: functional interaction between CB1 cannabinoid and metabotropic glutamate subtype 1 and 5 receptors.  
**S. Maione, L. Luongo, L. Cristino, V. de Novellis, V. Di Marzo and F. Rossi** (Italy)

*Working lunch*

*Afternoon session*

## **Wednesday, September 17**

### **SYMPOSIUM mGlu RECEPTORS AND DRUG ADDICTION**

- 4.00-4.25 p.m. Chairpersons: **P.M. Beart** and **A.J. Lawrence** (Australia)  
Regulation of mGluRs by nonsynaptic glutamate: Role in drug addiction  
**P. Kalivas** (USA)
- 4.25 – 4.50p.m. Type I mGlu receptors, drug-seeking & plasticity  
**A. J. Lawrence, M. S. Cowen, C. Adams and M. K. Bird** (Australia)
- 4.50-5.15p.m. Metabotropic Glutamate Receptor-5 Antagonists for the Treatment of Drug Dependence and Beyond: Characterization of the Novel mGlu5 Receptor Antagonist LY2300979  
**D. L. McKinzie, R.S. Crile, K.M. Knitowski, D.B. Shaw, L.M. Rorick-Kehn, J.C. Hart, G.J. Marek, R.A. Wright, J.M. Witkin, X. Li, H.E. Shannon, M.A. Trowbridge, A.E. Kingston, T.A. Day, K.W. Johnson, D.K. Dieckman, S. Iyengar, R.M. Simmons, R. White, B. Dressman and J.A. Monn** (USA)
- 5.15- 5.40p.m. *Coffee break*
- 5.40- 6.05p.m. Role of Metabotropic Glutamate Receptors in Nicotine Dependence  
**A. Markou** (USA)
- 6.05-6.30p.m. The behavioral profile of Group I and II mGluR manipulation: Relevance for multiple risk factors associated with relapse to drug use  
**F. Weiss** (USA)

### **SYMPOSIUM mGlu RECEPTORS AND EPILEPSY**

- 6.30- 6.55p.m. WAG/Rij rats as a model to unravel the role of mGlu receptors in absence epilepsy  
**G. van Luijckelaar** and **R. T. Ngomba** (The Netherlands and Italy)
- 6.55 – 7.20p.m. Abnormal Proliferation and Migration after Recurrent Early-Life Seizures: "A Role for mGluR Receptors".  
**L.K. Friedman, Corcia, M. Khalil, Y. Hong, H. Hallas, B.** (USA)

- 9.00 p.m. *Sicilian dinner at the Taormina's Gardens*
- 10.30.p.m. *Music and dancing with Leonardo Marino and Emiliana Perina*  
*Animation with: Lia Fiudcia*  
*"mGlu Défilé" by Francesca and Vedran*

## Thursday , September 18

- 08.30 – 11.30 a.m. **Poster session**  
*Working lunch*

### Afternoon session

## Thursday , September 18

- SYMPOSIUM** **mGlu RECEPTORS AS DRUG TARGETS IN SCHIZOPHRENIA**  
Chairperson: **E. Costa** (USA) and **G. Marek** (USA)
- 3.00-3.25p.m. Novel allosteric modulators of metabotropic glutamate receptors subtypes 2 and 5 for the treatment of schizophrenia  
**C.K. Jones**, *Z. Xiang, P.J. Jones, N.E. Byun , E.A. Hackler, A.L. Rodriguez, J.E. Ayala, C.M. Niswender, S. Jadhav, D.J. Sheffler, A.S. Hammond, R. Barret, A.D. Thompson, R. Williams, J.C. Gore, C.D.Weaver, C.W. Lindsley and P.J. Conn* (USA)
- 3.25-3.50 p.m. Activation of mGlu2 receptors mediates the "antipsychotic-like" activity of mGlu2/3 receptor agonists in three psychotomimetic drug models and regional distribution of mGlu2 vs. mGlu3 receptors  
**G.J. Marek**, *R.A. Wright, B. G. Johnson, M. Fell, K. Svensson, M. Benvenga, S. Chaney, D.D. Schoepp and J. Monn* (USA)
- 3.50 -4.15 p.m. mGlu2/3 Receptor Agonists: A Non-Dopamine Treatment Approach for Schizophrenia  
**B.J. Kinon**, *L. Zhang, D. McKinzie, F. Martenyi and A. Breier* (USA)
- 4.15 – 4.40 p.m. Altered glutamatergic receptors in schizophrenia: a post-mortem study  
**C. Corti**, *L. Crepaldi, M. Corsi, J.H. Xuereb and F. Ferraguti* (UK and Austria)
- 4.40 -5.05p.m. Inhibition of NAAG peptidases blocks positive and negative symptoms in *d*-amphetamine and PCP models of schizophrenia  
*R. T. Olszewski, K. A. Krolkowski, M. J. Lee, V. Kataria, R. Chen, J. Zhou<sup>^</sup>, A. P. Kozikowski, B.Wroblewska and J. H. Neale* (USA)
- 5.05 - 5.30 p.m. *Coffee break*

**SYMPOSIUM mGlu RECEPTORS AS TARGETS FOR ANXIETY AND DEPRESSIVE DISORDERS**

Chairpersons: **A. Pilc** (Poland) and **D.D. Schoepp** (USA)

- 5.30 -5.55 p.m. Control of Stress- and Anxiety- related Physiology and Behavior by mGluR7 Modulation  
*M. Fendt, S. Schmid, D. R. Thakker, L. H. Jacobson, S. Siegl, R. Yamamoto, K. Mitsukawa, R. Maier, P. H. Kelly, K. H. McAllister, D. Hoyer, H. van der Putten, J.F. Cryan and P. J. Flor* (Switzerland and Germany)
- 5.55-6.20 p.m. mGluR8 - a new target for anxiety disorders?  
**M. Fendt, H. Bürki, R. Böhringer, M. Ceci, T. Dürst, S. Imobersteg, J. Mosbacher, HR. Olpe, P. Schmid, C. Wittmann, H. van der Putten and KH. Mc Allister** (Switzerland)
- 6.20-6.45 p.m. Antidepressant-and anxiolytic-like effects of group III mGlu receptor ligand  
**A. Pilc, G. Nowak, J.M. Wieroka, K. Stachowicz, A. Palucha-Poniewiera and P. Branski**, (Poland)
- 6.45-7.10 p.m. mGlu2/3 receptor antagonists as potential drugs for the treatment of depression  
**S. Chaki** (Japan)
- 7.10 -7.35 p.m. Synergism between mGlu2/3 receptor and clinical antidepressants  
**V. Bruno** and *Matrisciano* (Italy)
- 9.00 p.m. *White party at the Capotaormina beach with music (Total white dresses kindly required)*

**Morning session**

**Friday , September 19**

**SYMPOSIUM mGlu RECEPTORS AS TARGETS FOR NEURODEGENERATIVE DISORDERS**

Chairpersons **M. Baudry** (USA) and **V. Bruno** (Italy)

- 8.15-8.40 a.m. Calpain-mediated mGluR1a truncation: a key step in excitotoxicity and hypoxia/ischemia  
**M. Baudry** (USA)
- 8.40-9.05 a.m. Metabotropic glutamate receptors and endocannabinoids in the mechanisms of post-ischemic neuronal death  
**D. Pellegrini-Giampietro** (Italy)

- 9.05-9.30a.m. Role of mGlu2 and mGlu3 metabotropic glutamate receptors in mechanisms of neurodegeneration/neuroprotection  
**G. Battaglia**, *G. Molinaro, F. Caraci, A. Copani, F. Nicoletti and V. Bruno* (Italy)
- 9.30-9.55 a.m. Imaging Retinal Apoptosis in Degenerative Disease and its Treatment: Involvement of mGlu Receptors.  
**T.E. Salt**, *L. Guo, A. L. Georgiou and M.F. Cordeiro* (UK)
- 9.55-10.20 a.m. Microglia cells protect neurons by engulfment of invading neutrophil granulocytes - A new mechanism of CNS immune privilege?  
**K. G. Reymann** (Germany)
- 10.20-10.45 a.m. *Coffee break*
- 10.45-11.10 a.m. Selective increase in sensitivity to group II mGluR activation in the Striatum of Mice Lacking the Familial Parkinsonism-Linked Genes *PINK1* or *Parkin*".  
*G. Martella, P. Platania, D. Vita, G. Madeo, A. Tschertter, A. Tassone, P. Bonsi, T Kitada, J. Shen and A. Pisani* (Italy and USA)
- 11.10-11.35 a.m. Metabotropic glutamate receptors and Parkinson's disease  
**M. Amalric** and *S. Lopez* (France)
- Chairpersons: **J. Conn** (USA) and **T. Salt** (UK)
- 11.35-12.00 p.m. Metabotropic Glutamate Receptors as Therapeutic Targets in Parkinson's Disease  
**I. J. Reynolds** (USA)
- 12.00-12.25 p.m. Allosteric modulation of mGluR4: a novel therapeutic direction for the treatment of Parkinson's disease.  
**C. M. Niswender**, *K. A. Johnson, C. D. Weaver, C. K. Jones, Q. Luo, A. L. Rodriguez, J. E. Marlo, T. de Paulis, A. D. Thompson, E. Days, T. Nalywajko, C. Austin, M. Williams, J. E. Ayala, R. Williams, C. W. Lindsley and P.J. Conn* (USA)

*Working lunch*

## Thursday, September 18

08.30 – 11.30 a.m. **Poster session**

### EXPRESSION/SIGNALING

1. Positive allosteric modulators of the type 5 metabotropic glutamate receptors alter the pattern of intracellular Ca<sup>2+</sup> signalling  
*S. J. Bradley, M. D. Wood and R. A. J. Challiss (UK)*
2. Synergic action of EphB receptors and group-I metabotropic glutamate receptors in modulating spine morphogenesis and the expression of synaptic markers in cultured striatal neurons  
*L. Calò, M. Patanè, D. Schillaci, E. Volpe, L. Iacovelli, S. Piccinin, P. Sale, D. Melchiorri and F. Nicoletti (Italy)*
3. Calcineurin inhibitor protein (CAIN) inhibits signaling by Group I metabotropic glutamate receptors  
*L. T. Ferreira, L. Dale, A. V. Babwah, M. Pampillo and S. S. Ferguson (Canada)*
4. mGlu2 metabotropic glutamate receptors are resistant to processes of homologous desensitization  
*L. Iacovelli, G. Molinaro, G. Battaglia, L. Di Menna, M. Motolese, J. Blahos, F. Matrisciano, C. Corti, M. Corsi, V. Bruno, A. De Blasi and F. Nicoletti (Italy and Czech Republic)*
5. Surface Expression of Metabotropic Glutamate Receptor Variants mGluR1a and mGluR1b in Transfected HEK293 cells  
*J. Kumpost, Z. Syrova, D. Frankova, L. Kulihsova, J. C. Bologna, L. Prezeau, J. P. Pin and J. Blahos (France)*
6. Pharmacological and biochemical features of a Wistar rat population with reduced expression of metabotropic glutamate receptor 2 (mGlu2) protein  
*L. Lindemann, S. Gatti, W. Spooren, T. Ballard, J. Beck, J. Messer, J. G. Wettstein and F. Knoflach (Switzerland)*
7. Characterization of presynaptic mGlu1 and mGlu5 autoreceptors controlling glutamate release from mouse cortical nerve endings.  
*V. Musante, E. Neri, M. Feligioni, A. Puliti, M. Pedrazzi, C. Usai, J. H. Henley, G. Battaglia and A. Pittaluga (Italy and UK)*
8. Presynaptic mGluR1 and mGluR5 receptors colocalize with NMDA and AMPA receptors on human and rodent noradrenergic terminals.  
*E. Neri, V. Musante, P. Severi, M. Raiteri and A. Pittaluga (Italy)*
9. Using the Human Sweet Taste Receptor to Discover Sweet Enhancers.  
*G. Servant, C. Tachdjian, X. Li, T. Ditschun, P. Kamdar, A. Rivadeneyra, F. Zhang, X-Q. Tang, Q. Chen, H. Zhang, A. Java and N. Gonsalves (USA)*

10. GABAergic CA1 *trilaminar neurons*, identified by virus-expressed EGFP, have mGluR8 enriched synaptic input and project to the subiculum  
*R. Tomioka, D.J. B. Roberts, P. Somogy and K. Rockland (UK and Japan)*

## SYNAPTIC PLASTICITY

11. mGluR5 positive allosteric modulators facilitate both LTP and LTD induction in the rat hippocampal CA1 region  
*J. E. Ayala, Y. Chen, J. L. Banko, D. J. Sheffler, R. Williams and P. J. Conn (USA)*
12. Differential between spatial learning and pavlovian conditioning on mGlu5-deficient C57BL/6J mice  
*M.K. Bird and A.J. Lawrence (Australia)*
13. Transient activation of mGluR1 produces an NMDA receptor-dependent long-lasting depression of CA1 pyramidal cell excitability  
*J. P. Chelliah, J. Brown and A. Randall (UK)*
14. Role of microtubule-associated protein 1B in metabotropic glutamate receptor-mediated endocytosis of AMPA receptors in hippocampus.  
*G. Davidkova and R. C. Carroll (USA)*
15. Metabotropic glutamate receptors mGluR4 and mGluR8 regulate transmission in the lateral olfactory tract-piriform cortex synapse  
*P. J. Jones, Z. Xiang and P. J. Conn (USA)*
16. Role of PKM Zeta in Long Term Potentiation in Perirhinal Cortex  
*I. Panaccione, F. Nicoletti and Z. I. Bashir (Italy and UK)*
17. State-dependent cAMP sensitivity of presynaptic function controlled by mGluR7 activation and internalization  
*K. A. Pelkey, L. Topolnik, X. Q. Yuan, J. C. Lacaille and C. J. McBain (USA and Canada)*
18. Modulation of synaptic plasticity in neonatal and adult rats by clustered ephrin B  
*S. Piccinin; C. Cinque; L. Calò; M. Patanè; D. Melchiorri; Z. Bashir; I. Panaccione; F. Eusebi and F. Nicoletti (Italy and UK)*
19. Functional interaction of metabotropic glutamate receptor 5 (mGluR5) and NMDA-receptor by an mGluR5 positive allosteric modulator in-vitro and in-vivo  
*H. Rosenbrock, G. Kramer, S. Hobson, M. Grundl and M. Grauert (Germany)*
20. Metabotropic glutamate receptor 5 in conditioned taste a version learning  
*A. Simonyi, P. Serfozo, P. B. Shelat, A. K. Ramsey and T. R. Schachtman (USA)*

## DRUG DEVELOPMENT

21. A fluorescence- based bio-nanosensor exploiting mGluR1a receptor pharmacology  
*N. Cherouati, J.B. Perez, Y.C. Liu and K. L. Martinez (Denmark)*
22. Carbamoyloxymes as novel non-competitive mGlu5 receptor antagonists  
*J. Galambos, K. Nógrádi, Gy. Domány, A. Bielik, Gy. M. Keserù, A. Bobok, B. Kiss, B. Benkò, M. Vastag, J. Laszy, I. Gyertyán, S. Farkas and K. Gál (Hungary)*
23. Members of a novel benzamide structural class act as positive allosteric modulators of metabotropic glutamate receptor subtype 5 by binding to a site other than that of 2-methyl-6-(phenylethynyl)-pyridine and its analogs  
*A.S. Hammond, A.L. Rodriguez, C.W. Lindsley and P.J. Conn (USA)*
24. A study on the molecular interaction between mGlu2 receptor agonists and positive allosteric modulators.  
*H. Lavreysen, L. Peeters, X. Langlois, P. Te Riele, F. Dautzenberg, C. Janssen, I. Biesmans, I. Van der Linden, I. Andres, J. M. Cid, A. Trabanco, G. Macdonald, G. Duvey, E. Le Poul, R. Lütjens and T. Meert (Belgium and Switzerland)*
25. Fast kinetics of mGluR1 activation measured by an optical method  
*P. Marcaggi, D. Dimitrov, H. Mutoh, J. Yokoyama and T. Knöpfel (UK and Japan)*
26. Permissive antagonism induced by negative allosteric modulators of mGluR7  
*C. M. Niswender, K. A. Johnson, Q. Luo, R. Williams, J. E. Ayala, S. Saleh, D. Orton, C. D. Weaver and P. J. Conn (USA)*
27. A novel and selective positive modulator of mGluR5, reduces dopamine D1 receptor agonist (SKF-81297) induced rearing  
*M. J. Robbins, P. J. Lovell, C. Reavill, A. Lucas, S. Butler, K. Cato, J. Cilia, B. Powney, A. Wise and E. Southam (UK)*
28. Synthesis and SAR of an mGluR5 allosteric partial antagonist lead: unexpected modulation of pharmacology with slight structural modifications to a 5- (phenylethynyl) pyrimidine scaffold  
*S. Sharma , A. Rodriguez, P.J. Conn and C. Lindsley (USA)*
29. Allosteric potentiators of metabotropic glutamate receptor subtype 1A differentially modulate independent signalling pathways in baby hamster kidney cells  
*D. J. Sheffler and P. J. Conn (USA)*
30. 2-Substituted benzimidazoles as low fold-shift positive allosteric modulators at the metabotropic glutamate receptor-2  
*U. Topiwala, H. N. Jimenez, H. Chen, M. Uberti, K. Jones, M. Marzabadi, M. Labelle and D. Doller (USA)*

31. Quantitative evaluation of central mGlu5 receptor occupancy in vivo by a novel mGluR5 antagonist in the rat  
*I. Vranesic, R. Glatthar, S. Desrayaud, M. Fendt, D. Hoyer, Y. Auberson, K.H. McAllister, M. Wyss and A. Buck (Switzerland)*
32. Re-evaluation of N-acetylaspartylglutamate (NAAG) as an agonist at group II mGluRs, and antagonist at NMDA receptors.  
*M. L. Woolley, A-C Fricker, M. H. S. Mok, A. J. Shah, R. delaFlor, L. A. Dawson and J. N. Kew (U.K)*

## PERIFERAL MGLU RECEPTORS

33. Involvement of central but not peripheral metabotropic glutamate 5 receptor in micturition control  
*M. Guillon, Y. Hu, L. Burbach, J. Cefalu, P. Nunn, X. Liu, O. Vilenski, A. Ford, B. Sun, W. Rong, G. Jaeschke, W. Spooren and Y. Zhong (USA, China and Switzerland)*
34. Metabotropic glutamate receptor type 1 (GRM1) at play in the glomerular filtration barrier  
*A. Puliti, V. Conti, G. Caridi, A. Corbelli, L. Musante, F. Piccardi, J. L. Guenet, G. Candiano, R. Gusmano, R. Ravazzolo and M. P. Rastaldi (Italy and France)*

## MGLU RECEPTORS AND CANCER

35. Sinergism between the DNA alkylating agent (BCNU) and mGlu3 receptor blockade in glioma cells expressing MGMT enzyme  
*A. Arcella, G. Battaglia, V. Bruno, G. Carpinelli, M. A. Oliva, F. Nicoletti and F. Giangaspero (Italy)*
36. The role of metabotropic glutamate receptor 1 in proliferation of human cancer cells in vitro  
*S. Pshenichkin, E. Grajkowska, G. R. Takoudjou and J. T. Wroblewski (USA)*

## IMMUNOLOGY, INFLAMMATION

37. The mGlu4 metabotropic glutamate receptor enhancer PHCCC: a novel inducer of peripheral immuno/inflammatory regulation in autoimmune EAE  
*R. Di Marco, F. Fallarino, S. Notartomaso, F. Fazio, C. Volpi, C. Vacca, P. Scarselli, G. Battaglia, V. Bruno, F. Nicoletti and U. Grohmann (Italy)*
38. Group I mGluRs reduce the activation profile of lipopolysaccharide-exposed rat microglial cultures  
*M. C. Farso, R. D. O'Shea, B. Jarrott and P. M. Beart (Australia)*

39. Switch in the expression of mGlu1a and mGlu5 metabotropic glutamate receptors in the cerebellum of mice developing experimental autoimmune encephalomyelitis and in autaptic cerebellar samples from patients with multiple sclerosis  
*F. Fazio, S. Notartomaso, E. Aronica, M. Storto, G. Battaglia, S. Gatti, F. Biagioni, R. Gradini, V. Bruno, F. Nicoletti and R. Di Marco (Switzerland and Italy)*

## PAIN

40. Group III metabotropic glutamate receptors inhibit hyperalgesia in animal models of inflammation and neuropathic pain  
*C. Goudet, E. Chapuy, A. Alloui, F. Acher, J-P. Pin and A. Eschalier (France)*
41. Metabotropic glutamate receptor 8 (mGluR8) modulates glutamate and glycine release in the striatum and decreases nociceptive responses in healthy and neuropathic rats  
*I. Marabese, V. de Novellis, F. Guida, M. Annalucia, F. Rossi and S. Maione (Italy)*
42. Differential effects of amygdala mGluR7 and mGluR8 on pain-related behaviour in a model of arthritic pain in rat  
*E. Palazzo, G. Ji, F. Rossi, S. Maione and V. Neugebauer (Italy and USA)*

## ADDICTION

43. Spontaneous but not naloxone-induced morphine withdrawal increases mGlu2/3 receptors expression in the nucleus accumbens of rat  
*A. M. E. Modafferi, M. Diana, F. Nicoletti and S. Scaccianoce (Italy)*
44. Allosteric modulation of metabotropic glutamate receptor 5 affects phosphorylation, internalization, and desensitization of the  $\mu$ -opioid receptor  
*H. Schroeder, T. Koch, D-F Wu, A. Seifert, M. Rankovic, S. Schulz and V. Hoelll (Germany)*
45. Effects of Metabotropic Glutamate Receptor 5 (mGluR5) Antagonists in Rats and Mice Trained to Discriminate or Self-Administer Cocaine  
*G. Tamagnan, D. Alagille and S. B. Caine (USA)*

## ANXIETY AND DEPRESSION

46. Comparison of anxiolytic efficacy and cognitive side-effect profile of type I metabotropic glutamate receptor ligands with various mGluR1/mGluR5 selectivity  
*I. Gyertyán, K. Sághy, J. Laszy, G. Imre, A. Bobok, B. Kiss, K. Fazekas, K. Nógrádi, É. Ágai-Csongor, G. Domány, K. Gál and K. Tihanyi (Hungary)*
47. The roles of mGlu2 and mGlu3 receptors in regulation of neuronal activity in the central amygdala  
*A.M. Linden, B.G. Johnson, N. Trokovic, E.R. Korpi and D.D. Schoepp (USA)*

48. Chronic treatment with agomelatine antagonizes BDNF and glutamate metabotropic receptor changes induces by prenatal stress in the rat: new pharmacological effects related to neurogenesis regulation  
*S. Maccari, A. R. Zuena, J. Mairesse, C. Cinque, P. Matteucci, G. S. Alemà, S. Morley-Fletcher, A. Catalani, F. Nicoletti, K. Bernard, C. Gabriel, E. Mocaër and P. Casolini (France and Italy)*
49. Metabotropic glutamate (mGlu) 2/3 receptors and depressive disorder: new pharmacological targets to shorten the clinical latency of antidepressant drugs and potential involvement the pathophysiology of depression.  
*F. Matrisciano, V. Bruno, D. Melchiorri, P. Girardi, R. Tatarelli, A.A. Mathè, P. Giusti and F. Nicoletti (Italy and Sweden)*
50. Models of anxiety and depression sensitive to the activation of the mGlu2 receptor with the mGlu2/3 agonist LY354740  
*B. Pouzet, N. Aerts, J.A. Bouwknecht, M. Mahieu and R. Willems (Belgium)*
51. AMN082, an allosteric mGluR7 agonist that inhibits afferent glutamatergic transmission in rat basolateral amygdala  
*A. Ugolini, C. H. Large and M. Corsi (Italy)*
52. Regulation of GABA synthesis in mice with mGlu7 receptor ablation  
*J. M. Wieronska, P Branski and A. Pilc (Poland)*

## SCHIZOPHRENIA

53. Role of glutamate and metabotropic glutamate receptors in schizophrenia-like cognitive deficits induced by phencyclidine in rats  
*N. Amitai, R. Kuczenski and A. Markou (USA)*
54. Differential effects of the mGlu2/3 receptor agonist LY379268 and clozapine on ketamine evoked locomotor activity and neurotransmitter release in the rat brain  
*M. J. Fell, J. S. Katner, B. G. Johnson, K. W. Perr and K. A. Svensson (USA)*
55. mGlu2 and not mGlu3 or D2 receptors mediate the antipsychotic pharmacology of mGlu2,3 agonists in psychostimulant mouse models of psychosis  
*B. G. Johnson, D. D. Schoepp and G. J. Marek (USA)*
56. Interaction between 5-HT<sub>2A</sub> and mGlu2/3 receptor signalling in cortical slices  
*G. Molinaro, L. Di Menna, B. Rizzo, M. Storto, M. Curto, S. Pallottino, F. Nicoletti, V. Bruno and G. Battaglia (Italy)*
57. Lack of in vitro evidence for interaction of the mGlu2/3 receptor agonists LY354740 and LY379268 with dopamine D2 receptors.  
*D. Nelson, V. Lucaites, P. Threlkeld and J. Monn (USA)*

## CANNABINOIDS

58. Interplay between group I mGlu receptors and the endocannabinoid system in the CA1 hippocampal area: an electrophysiological study  
*R. Berlinguer Palmi, E. Landucci, G. Baccini, F. Moroni, D. E. Pellegrini-Giampietro and G. Mannaioni (Italy)*
59. mGlu1 $\alpha$  receptors co-localize with CB1 receptors in a subpopulation of CA1 interneurons in organotypic hippocampal slice cultures and adult rat brain  
*F. Boscia, F. Ferraguti, F. Moroni, L. Annunziato and D. E. Pellegrini-Giampietro (Italy and Austria)*
60. Interplay between group I mGlu receptors and the endocannabinoid system in the CA1 hippocampal area: studies in models of cerebral ischemia  
*E. Landucci, T. Scartabelli, G. Moneti, F. Boscia, A. Cozzi, F. Moroni, G. Mannaioni and D. E. Pellegrini-Giampietro (Italy)*
61. Cannabinoid receptors and absence epilepsy  
*C. M. Van Rijn, S. Gaetani, A. Badura, I. Santolini, E. Willems-van Bree, P. Di Pasquale, R. Colangeri, V. Cuomo, F. Nicoletti and R. T. Ngomba (The Netherlands and Italy)*

## NEURODEVELOPMENT

62. The selective enhancer of mGlu4 metabotropic glutamate receptors, PHCCC, regulates dendrite formation by amplifying the expression of Orc3 proteins in cultured cerebellar granule cells  
*I. Cappuccio, C. Colapicchioni, M. Bonelli, L. Manzari, C. Busceti, F. Nicoletti and D. Melchiorri (Italy)*
63. Metabotropic glutamate receptors in embryonic stem cells: where are we now?  
*I. Cappuccio, I. Sarichelou, P. Spinanti, P. Mosillo, P. Sale, F. Nicoletti and D. Melchiorri (Italy)*
64. Differentiation of perforant path inputs into CA1 by an mGlu2 agonist, LY395756.  
*L. Ceolin, Z. A. Bortolotto, G. L. Collingridge and D. Lodge (UK)*
65. Type 3 metabotropic glutamate receptors modulate the differentiation of SVZ-derived neural stem cells towards the astrocytic lineage by interacting with bone morphogenic proteins.  
*C. Ciceroni, P. Mosillo, E. Mastrantoni, P. Sale, L. Ricci-Vitiani, F. Stocchi, F. Nicoletti and D. Melchiorri (Italy)*
66. Dysregulation of mTOR signaling in mouse model of Fragile X Syndrome  
*A. Sharma, Y. Takayasu, C. A. Hoeffler, T. Miyawaki, S. M. McBride, E. Klann and R. S. Zukin (USA)*

## NEURODEGENERATION

67. Neuroprotective effects of glutamate are mediated by G protein-independent signaling of metabotropic glutamate receptor 1  
*A. C. Emery, S. Pshenichkin, E. Grajkowska and J.T. Wroblewski (USA)*
68. Type-5 metabotropic glutamate receptors exert a permissive role on the induction of warm and cold ischemia injury in isolated perfused livers  
*A. Ferrigno, V. Rizzo, M. Storto, B. Riozzi, R. Moratti, P. Richelmi, F. Nicoletti and M. Vairetti (Italy)*
69. Activation of group I mGlu receptors induces tolerance in an *in vitro* model of ischemic preconditioning: critical contribution of poly(ADP-ribose) polymerase (PARP)  
*E. Gerace, T. Scartabelli, E. Landucci, L. Formentini, F. Moroni, A. Chiarugi and D. E. Pellegrini-Giampietro (Italy)*
70. Metabotropic glutamate receptor subtypes and experimental cerebral ischemia  
*S. Moyanova, L. Kortenska, F. Mastroiacovo, R. Mitreva, F. Nicoletti and R. T. Ngomba (Italy)*
71. Neuroprotective and toxic roles of metabotropic glutamate receptor 5 in astrocyte culture cell death  
*M. Paquet, Y. Kamar, P. De Gouveia, T. Cregan, S. Cregan and S. Ferguson (Canada)*
72. Fate of mGlu2 receptors in  $\beta$ -amyloid-affected brain regions of Alzheimer cases and aged PS2APP mice  
*G. Richards, J. Messer, V. Mutel, J. Beck, H. Stadler, J. Wichmann, B. Bohrmann, R. L. M. Faull and S. Gatti (Switzerland)*
73. Postconditioning by group I mGlu receptor activation: a novel neuroprotective strategy in rat organotypic hippocampal slice model of cerebral ischemia  
*T. Scartabelli, E. Gerace, E. Landucci, F. Moroni and D. E. Pellegrini-Giampietro (Italy)*
74. Role of C-terminal domain of metabotropic glutamate receptor 1 in receptor-induced toxicity  
*G. R. Takoudjou, S. Pshenichkin, E. Grajkowska and J.T. Wroblewski (USA)*
75. Caesarean section birth per se or followed by acute global asphyxia induces a selective reduction in the expression of mGlu1 $\alpha$  receptors in the hippocampus of adult rats  
*A. R. Zuena, P. Casolini, A. Venerosi, C. Giuli, A. Catalani, F. Nicoletti and G. Calamandrei (Italy)*

## PARKINSON'S DISEASE/HUNTINGTON'S DISEASE

76. The group III mGlu receptor agonist L-AP4 affords both neurochemical and functional neuroprotection against a 6-hydroxydopamine lesion of the substantia nigra in rats  
*M. T. J Betts, M.J. O'Neill, S.N Mitchell and S. Duty (UK)*
77. LSP1-2111, a new orthosteric group III mGluR agonist with preferential activity on mGluR4, modulates the striatopallidal synapse and alleviates Parkinsonian symptoms  
*C. Beurrier, D. Revy, S. Lopez, M. Lherondel, C. Goudet, F. Acher and M. Amalric (France)*
78. Transforming growth factor  $\beta$ -1 levels are reduced in brain and serum of presymptomatic Huntington's disease patients  
*M. Cannella, G. Battaglia, G. Molinaro, B. Riozzi, S. Orobello, M.L. Maat-Schieman, E. Aronica, J. Sassone, A. Ciammola, S. Sipione, V. Bruno, F. Nicoletti and F. Squitieri (Italy, The Netherlands and Canada);*
79. (S)-3,4-DCPG has antiparkinsonian effects in chronic models of Parkinson's disease  
*K. A. Johnson, C. K. Jones, M. Marvanova, A. D. Thompson, M. N. Tantawy, R. M. Baldwin and P. J. Conn (USA)*
80. Metabotropic glutamate receptor type 5 (mGluR5) labeled with [<sup>3</sup>H]-ABP688 in the basal ganglia of humans and parkinsonian monkeys  
*B. Ouattara, L. Grégoire, M. Morissette, P. Samadi, F. Gasparini, I. -T. Vranesic, G. Bilbe, K. McAllister, D. Johns, B. Gomez-Mancilla and T. Di Paolo (Canada and Switzerland)*
81. Group I mGluR signaling is attenuated in young asymptomatic Huntington's disease mouse model  
*F. M. Ribeiro, M. Paquet, L. T. Ferreira, T. Cregan and S. S. Ferguson (Canada)*
82. Pharmacological activation of group-II mGlu receptors enhances the formation of glial-derived neurotrophic factor (GDNF) in the mouse corpus striatum  
*B. Riozzi, G. Battaglia, G. Molinaro, A. Traficante, P. Spinsanti, M. Storto, T. De Vita, G. Mudò, A. Bonomo, V. Bruno, F. Nicoletti and N. Belluardo (Italy)*
83. Blockade rather than activation of group II metabotropic glutamate receptors ameliorates Parkinsonian symptoms in rats  
*S. Lopez, N. Turle-Lorenzo and M. Amalric (France)*
84. The role of metabotropic glutamate receptors 7 in several models of Parkinson's disease  
*B. Greco, S. Lopez, H. Van der Putten, P.J. Flor and M. Amalric (France and Switzerland)*