

A great deal of information has been accumulated during the last three decades and this has improved our understanding of neuronal transmission and plasticity under normal and pathological conditions. For instance, the discovery at the synaptic level of the molecular mechanisms regulating the expression and transduction mechanisms of receptors for glutamate, the main excitatory neurotransmitter in the mammalian central nervous system (CNS), has been essential for understanding how events related to normal neuronal communication, to neuronal plasticity (e.g., LTP and LTD) under normal and pathological conditions, as well as to abusive, i.e. excitotoxic, NMDA receptor subtype-mediated events, are tuned. These advances have been made possible by the multidisciplinary approach used by neuroscientists in their researches. The concept has then emerged that redistribution between synaptic and extrasynaptic membranes of specific receptor subunits together with anomalous potentiation of NMDA receptor function, operated via interaction with neuroinflammatory mediators (e.g. cytokines) or kinases (e.g. Src kinase), causes disturbance of the glutamatergic synapse and this, for instance, may form the basis for disorders of learning and memory processes as well as for the development of pain sensitization and excitotoxicity. Accordingly, pathological glutamate transmission has been implicated in several diseases including Alzheimer's disease, a chronic neurodegenerative malady paradigmatic for learning and memory deficits, neuropathic pain, glaucoma and stroke, clinical conditions in great demand for effective therapies. These and other subjects are the main topics to be discussed at the Workshop on Apoptosis in Biology and Medicine that is the XII in a successful series organized in the frame of the PhD Course on Pharmacology and Biochemistry of Cell Death run at the University of Calabria at Cosenza in Consortium with the University "Magna Graecia" at Catanzaro and the University of Rome "Tor Vergata". Quite importantly, the XII Workshop is the result of an ongoing collaboration with scientists leading the PhD course on Cellular Biochemistry and Drug Action in Oncology run at the University of Calabria and having as the main scope the organization of a Doctoral School in Molecular and Translational Medicine. Accordingly, this is the ideal venue where to announce the project and invite scientists from regional, national and international research laboratories to contribute to the success of this challenging academic venture here in Calabria.

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UNIVERSITY OF CALABRIA
DEPARTMENT OF PHARMACOBIOLOGY

PhD COURSES ON PHARMACOLOGY AND BIOCHEMISTRY OF CELL DEATH & CELLULAR BIOCHEMISTRY AND DRUG ACTIONS IN ONCOLOGY

Under the auspices of

University of Calabria, Cosenza
University of Catanzaro "Magna Graecia"
Italian Society of Neuroscience
University Center for Adaptive Disorders and
Headache (UCADH)

XII WORKSHOP on APOPTOSIS IN BIOLOGY AND MEDICINE

Parghelia (Vibo Valentia)
Porto Pargos Hotel
20th-22th May, 2009

Wednesday 20th May

18.00 Welcome address and cocktail

Thursday 21th May

Chairpersons S.A. Lipton (USA) and G. Di Renzo (Italy)

8.30-9.00 *L. Annunziato (Naples)*

Neurobiology of Na⁺/Ca⁺⁺ exchanger in normal and pathological brain

9.00-9.30 *L. Berliocchi, D. Rotiroti and M.T. Corasaniti (Catanzaro)*

Local translation controls synaptic plasticity

9.30-10.00 *R. Nisticò (Cosenza)*

Cognitive strengthening of synaptic communication

10.00-10.30 *P. Nicotera (Bonn)*

Synaptic loss and plasticity in neurodegeneration

10.30-11.00 *Coffee Break*

Chairpersons L. Annunziato (Italy) and H.E.P. Bazan (USA)

11.00-11.30 *G. Bonanno (Genoa)*

Astroglial control of synaptic function

11.30-12.00 *M. L. Cucchiaroni, E. Guatteo and N.B. Mercuri (Rome)*

Physiological and pathological role of transient receptor channels (TRP) in the substantia nigra pars compacta

12.00-12.30 *M. Pizzi (Brescia)*

NF-kappaB c-Rel factor: a molecular determinant for resilience of nigral dopaminergic neurons to aging

12.30-13.00 *F. Blandini (Pavia)*

Mechanisms and biomarkers of neurodegeneration in Parkinson's disease: from experimental models to the patient

13.00-13.30 *General Discussion*

18.00-19.30 Poster Communications

Friday 22nd May

Chairpersons O. Cantoni (Italy) and I. Lizasoain (Spain)

8.30-9.00 *Stuart A. Lipton (La Jolla)*

Redox-mediated mitochondrial damage in neurodegenerative diseases

9.00-9.30 *R. Russo, L.A. Morrone, M.T. Corasaniti and G. Bagetta (Cosenza, Catanzaro)*

Pro-survival pathways and neuronal vulnerability

9.30-10.00 *H.E.P. Bazan (New Orleans)*

Growth factor-mediated cornea nerve regeneration

10.00-10.30 *C. Nucci (Rome)*

Optic nerve and optic radiation neurodegeneration in glaucoma: an in vivo analysis with MR diffusion tensor imaging

10.30-11.00 *Coffee Break*

Chairpersons S. Amoroso (Italy) and M.A. Moro (Spain)

11.00-11.30 *D. Amantea, G. Bagetta and M.T. Corasaniti (Cosenza, Catanzaro)*

Definition of MMPs and IL-1b interplay in the ischemic brain

11.30-12.00 *I. Lizasoain (Madrid)*

Pre-conditioning mechanisms in stroke PARP and neuroprotection under stroke

12.00-12.30 *M.A. Moro (Madrid)*

Nuclear receptors: role in neuroprotection and acute stroke resolution

12.30-13.00 *N. Bazan (New Orleans)*

Novel survival signaling by docosanoids is unregulated in early stages of neurodegenerations

13.00-13.30 *General Discussion*

Sponsors

Faculty of Pharmacy, UNICZ

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Pharmacists Association of Catanzaro and Cosenza

ARPACAL – Calabria Region

Scientific Information

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Meeting Venue

Porgo Pargos Hotel (tel. 39 0963 600351) is located at Parghelia (Vibo Valentia), in one of the loveliest spots of the Tirrenian Coast facing the still active Stromboli volcano. The international airport of Lamezia Terme (Catanzaro) is 30 Km from the Hotel. Further travelling information are available on the web at www.portopargos.com. A reduced price has been agreed for the full board accommodation of participants to the workshop.

Fellowships and financial assistance

A limited number of grants will be available to support the participation of students from the PhD courses in Pharmacology and Biochemistry of Cell Death and Cellular Biochemistry and Drug Action in Oncology, presenting their original scientific data as poster communication.

Language

The official language of the conference is English.

Secretariat

Mr. Nicola Fico

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