

Under the auspices of

University of Calabria, Rende, Cosenza
University "Magna Græcia", Catanzaro

Sponsor



International Scientific Committee

G. Bagetta (Cosenza, Italy)
A. Chiarugi (Florence, Italy)
M.T. Corasaniti (Catanzaro, Italy)
I. Lizasoain (Madrid, Spain)
M.A. Moro (Madrid, Spain)
L. A. Morrone (Cosenza, Italy)
R. Nisticò (Cosenza-Rome, Italy)
G. Pignataro (Naples, Italy)
D. Rotiroti (Catanzaro, Italy)
A. Scorziello (Naples, Italy)

Local Organizing Committee

D. Amantea (Cosenza)
R. Russo (Cosenza)

Secretariat

Mr. Nicola Fico
Department of Pharmacobiology
University of Calabria
87030 Arcavacata di Rende (CS)
☎ (+39-984) 493462 - 493248
Fax (+39-984) 493462
E-mail fico@unical.it



DEPARTMENT OF PHARMACOBIOLOGY
PhD COURSE IN PHARMACOLOGY AND
BIOCHEMISTRY OF CELL DEATH

**Brain ischemia:
from basic mechanisms to
development of novel therapeutics**

University of Calabria
Sala stampa, Aula Magna
12th June, 2008

*Organised in the frame of the
Integrated Actions Italy-Spain*

*Project financed by
Ministerio Español de Educación y Ciencia
Ministero Italiano dell'Università e della Ricerca*

*Project title
Regulation of matrix metalloproteases (MMPs)
expression after brain ischemia*

*Spanish research group:
M.A. Moro Sánchez (coordinator)
I. Lizasoain Hernández
O. Hurtado Moreno
M. Sobrado Sanz
J. Miguel Pradillo
D. Fernández López
J. Rodríguez Morales*

*Italian research group:
G. Bagetta (coordinator)
M.T. Corasaniti
L.A. Morrone
D. Amantea
M. Gliozzi*

Rationale

Stroke is a major cause of death and of long term disability worldwide associated with significant clinical and socioeconomical implications that emphasize the need for effective therapies.

In fact, current therapeutic approaches only partially ameliorate the clinical outcome of stroke patients as they are aimed at preserving or restoring cerebral blood flow rather than preventing the actual mechanisms associated with neuronal cell death.

Ischemic neuronal damage is primarily triggered by excitotoxicity, oxidative stress and cell death pathways. Moreover, increasing evidence suggests that neuroinflammatory processes play a pivotal role in the pathophysiology of brain ischemia. Experimentally and clinically, stroke is followed by an immediate and a delayed inflammatory response characterized by the production of inflammatory cytokines, the activation of resident glial cells and leukocyte and monocyte infiltration in the brain. Interestingly, in addition to their deleterious contribution to ischemic tissue damage, cytokine-mediated mechanisms may also exert beneficial effects on stroke recovery.

The workshop will focus on recently disclosed crucial mechanisms implicated in the neuroinflammatory response to stroke (e.g. Toll-like receptors, histone deacetylase, matrix metalloproteinases) and on novel pharmacological approaches (e.g. PPARgamma agonists, hydrogen peroxide and post-conditioning) which may be potentially translated into the clinic.

The event is organised in the frame of the Integrated actions Italy-Spain financed by the Ministerio Español de Educación y Ciencia and by the Ministero Italiano dell'Università e della Ricerca. It represents one of the annual international workshops addressed to students of the PhD course in Pharmacology and Biochemistry of Cell Death, run at the University of Calabria in consortium with the University Magna Graecia of Catanzaro and the University Tor Vergata of Rome. As for the past events, this workshop is aimed at stimulating student interchange projects (e.g. Erasmus) among European Universities. The topics discussed during the meeting will provide an opportunity to young scientists, PhD and PostDoc to improve their knowledge in the field of pharmacology of cell death and repair.

Programme

8.30-8.45 Wellcome address

8.45-9.15 I. Lizasoain (Madrid, Spain)
Role of “Toll-like” receptors in stroke

9.15-9.45 A. Chiarugi (Florence, Italy)
**Histone deacetylase inhibitors in neuropathology:
focus on ischemia and inflammation**

9.45-10.10 D. Amantea (Cosenza, Italy)
**Matrix metalloproteinases trigger
neuroinflammatory mediators in brain ischemia**

10.10-10.40 R. Russo (Cosenza, Italy)
**Modulation of pro-survival and death-associated
pathways under retinal ischemia/reperfusion**

10.40-11.00 Coffee Break

11.00-11.30 M.A. Moro (Madrid, Spain)
**PPARgamma receptor as a therapeutic target in
acute stroke**

11.30-12.00 A. Scorziello (Naples, Italy)
**NO-induced neuroprotection in ischemic
preconditioning**

12.00-12.30 G. Pignataro (Naples, Italy)
**In vivo and in vitro characterization of a novel
strategy for stroke: ischemic post-conditioning**

12.30-13.00 R. Nisticò (Cosenza-Rome, Italy)
**Potential therapeutic usefulness of hydrogen
peroxide in conditions of cerebral ischemia**

13.00-13.30 General Discussion