

Major sponsor



International Symposium and Training  
Course

**ICRO**-UNESCO

# " Calcium Signalling, with special attention to cell motility and the cytoskeleton"



## HOSTING INSTITUTIONS



Instituto de Investigaciones Biológicas Clemente Estable



Facultad de Medicina,



Facultad de Ciencias,

Facultad de Ciencias  
*Universidad de la República*

October 16 to 29, 2005.

Organizing International Committee: Dr. J. R. Sotelo (Uruguay), J. C. Benech (Uruguay), A. Kun (Uruguay), Dr. E. Carafoli (Italy), Dr. L. Santella (Italy), Dr. J. Mercer (USA), Dr. C. Cameron (Brasil), Dr. Roy E. Larson (Brazil), Dr. R. Benavente (Germany).

Organizing Local Committee: Dr. J. R. Sotelo, Dr. J. C. Benech, Dr. A. Kun, Dr. J. R. Sotelo Silveira, Dr. Aldo Calliari, Msc. G. Casanova. Msc. C. Chalar

# Course Programme

Experimental Laboratory work: The students will be divided in five groups that will be working simultaneously in different laboratories. The students will do the experiments by themselves.

**Each Lecture is 50 min long plus 10 min discussion**

<b>Time</b>	<b>Monday 17</b>	<b>Tuesday 18</b>	<b>Wednesday 19</b>
	<b>Morning</b>	<b>Morning</b>	<b>Morning</b>
8:30 - 9:30	J. Mercer, "Genetics of Unconventional Myosins"	G. Bloom, "Regulation of Actin Assembly and Cell Motility by IQGAP1."	G. Gundersen, "Role of Rho family GTPases in regulating the cytoskeleton".
9:30 - 9:40	Short break	Short break	Short break
9:40-10:40	W. Provance, "Introduction to light microscopy and image processing"	A. Caceres, "Microtubule-microfilament interactions during axon formation"	R. Benavente, "Nuclear lamins and the organization of the nuclear envelope".
10:40-11:00	Long break	Long break	Long break
11:00-12:00	R. Larson, "The nucleoskeleton: structural organization within the nucleus"	E. Mules, "Rab GTPases and organelle motility."	I. Herrera, "Trafficking of prion proteins: the caveolae-mediated vs. the clathrin-mediated pathway. Immunoelectron microscopic approach"
12:00-13:30	Lunch	Lunch	Lunch
	<b>Afternoon</b>	<b>Afternoon</b>	<b>Afternoon</b>
13:30-14:30	J. R. Sotelo Silveira	S. Chifflet, "Actin cytoskeleton an the plasma membrane potential of epithelial cells"	Laurence Goutebroze, "Molecular organization of nodes of Ranvier in vertebrate myelinated fibers".
14:30-15:00	Long break	Long break	Long break
15:00-18:00	Practical Course	Practical Course	Practical Course

**Each Lecture is 50 min long plus 10 min discussion**

<b>Time</b>	<b>Thursday 20</b>	<b>Friday 21</b>
	<b>Morning</b>	<b>Morning</b>
8:30 - 9:30	J. Kendrick-Jones, " Probing the intracellular functions and properties of unconventional myosins"	E. Chini, "Physiological role of intracellular Ca <sup>2+</sup> messengers"
9:30 - 9:40	Short break	Short break
9:40-10:40	C. Cameron, "Regulation of Myosin V Activity by Calcium."	Chalk talk
10:40-11:00	Long break	Long break
11:00-12:00	F. S. Espindola, "Myosin Va, calmodulin, snares and secretion"	Chalk talk
12:00-13:30	Lunch	Lunch
	<b>Afternoon</b>	<b>Afternoon</b>
13:30-14:30	A. Kun, "Axonal glial relationship"	Trip to the Symposium
17:30-18:00	Long break	
18:00- 19:00	Practical Course	



**Each Lecture is 50 min long plus 10 min discussion**

<b>Time</b>	<b>Monday 24</b>	<b>Tuesday 25</b>	<b>Wednesday 26</b>
8:30 - 9:30	H. Oberleithner, "Nanoscopy in Physiology and Medicine."	O. Uchitel, "Calcium channels and channelopathies"	J. Naranjo, "Calcium regulated gene expression"
9:30 - 9:40	Short break	Short break	Short break
9:40 - 10:40	R. DiPolo, "Nucleotide regulation of the sodium-calcium exchanger through modulation of regulatory ion interactions."	A. Darszon, "Ca <sup>2+</sup> channels and sperm physiology."	C. Gutierrez Merino, "ROS/RNS involved in the deregulation of neuronal bioenergetics in the early stages of necrotic and apoptotic death".
10:40-11:00	Long break	Long break	Long break
11:00-12:00	E. Carafoli, "Calcium as a signalling agent: from physiology to pathology"	D. Bano, "Calcium deregulation in neuronal degeneration".	M. Dierssen, "Calcium regulation of dendritic development"
12:00-13:30	Prof. Ad Honorem Lunch	Lunch	Lunch
13:30-14:30	G. Folle, "Flow Cytometry, Principles, Applications and Perspectives"	W. Martínez	A. Fernández, "Postnatal reurogenesis in the vertebrate nervous system"
14:30-15:00	Break	Break	Break
15:00-18:00	Practical Course	Practical Course	Practical Course

<b>Time</b>	<b>Thursday 27</b>	<b>Friday 28</b>
8:30-9:30	J. C. Benech, "Ca <sup>2+</sup> free measurement in Biological Systems"	
9:30-9:40	Short break	Short break
9:40-10:40	G. Brum, "Regulation of Ca <sup>2+</sup> sparks in skeletal muscle"	
10:40-11:00	Long break	Long break
11:00-12:00	G. Pizarro, "Ca <sup>2+</sup> release amphibian muscle, a tale of two channels"	C. Chalar
12:00-13:30	Lunch	Lunch
13:30-14:30	M. Brauer, "Semaphorin signalling in cell migration"	
14:30-15:00	Break	
15:00-18:00	Practical course	

# Experimental Course

## October 17-19

- 15:00 - 18:00 Aldo Calliari (location IIBCE).  
"Axonal Fields in Culture: a  
methodological approach to study  
axonal biochemistry"
- 15:00 - 18:00 William Provance & Ryan Karcher  
(location IIBCE). "Melanosome  
dynamics in melanophores"
- 15:00 - 18:00 A. Kun, (location IIBCE),  
Molecular Characterization of  
Peripheral Nerve Cytoskeleton
- 15:00 - 18:00 J. R. Sotelo Silveira (location  
IIBCE). Periaxoplasmic Ribosomal  
Domains and the Axonal  
Cytoskeleton.
- 15:00 - 18:00 G. Folle, (location IIBCE), Flow  
Cytometry: Principles, Applications  
and Perspectives
- 15:00 - 18:00 W. Martínez (location IIBCE)

## October 25-27

- A. Fernández & G. Casanova (location  
School of Sciences). Studing Postnatal  
Neurogenesis by  
immunocytochemistry.
- S. Chifflet (location School of  
Medicine), "Organization of the  
cytoskeleton in epithelial cells. Role of  
the plasma  
membrane potential."
- G. Brum & G. Pizarro (location School  
of Medicine), Measurement of Ca  
release in skeletal and cardiac muscle.
- C. Chalar (location IIBCE). Study of  
Gen Expression Related to Calcareous  
Corpuscles in Echinococcus granulosus
- J. C. Benech & C. Escande (location  
IIBCE) "Calcium signals in isolated  
nuclei and activation of transcription  
factors"
- Jong Tai Chun (location IIBCE),  
"Subcellular specific expression of GFP  
fusion proteins in HeLa cells"