United Nations Educational, Scientific and Cultural Organization
Organisation des Nations Unies pour l=Education, la Science et la Culture

I C R O INTERNATIONAL CELL RESEARCH ORGANIZATION

ORGANISATION INTERNATIONALE DE RECHERCHE SUR LA CELLULE

ICRO-UNESCO-EMBO
International Symposium and Training Course
"Calcium Signalling, with special attention to cell motility and the cytoskeleton"

Instituto de Investigaciones Biológicas
Clemente Estable (IIBCE)
Montevideo, Uruguay
October 16 to 29, 2005

Objectives: The main objective of this Course-Symposium is to introduce Molecular and Cell Biology research to students from Latin-American and other developing countries. The present course is based mostly on two different subjects: a) calcium homeostasis and the role of calcium as a second messenger, and b) cell Motility, molecular motors and intracellular transport. The course will consist in a practical training part and a theoretical part. The Mini-Symposium will consist in presentations by the Speakers of their recent work.

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 (Brazil), 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

Tentative list of Speakers:
Dr. Ernesto Carafoli, University of Padova, Padova, Italy.
Dr. Luigia Santella, Stazione Zoologica Anton Dohrn, Naples, Italy
Dr. Reinaldo DiPolo, IVIC, Caracas, Venezuela
Dr. Luis Beauge, Instituto de Investigaciones Médicas Mercedes y Martin Ferreira, Cordoba, Argentina
Dr. Jose R. Naranjo, Centro Nacional de Biotecnologia, Madrid, Spain
Dr. Alberto Darszon, Universidad Nacional Autonoma de Mexico, Mexico
Dr. Mitsuhiko Ikura, Ontario Cancer Institute, University of Toronto, Toronto, Canada
Dr. Giuseppe Inesi, University of Maryland, Baltimore, USA
Dr. Leopoldo deMeis, Universidade Federal de Rio de Janeiro, Rio de Janeiro, Brazil
Dr. R. Llinas, New York University School of Medicine, New York, USA
Dr. Hans Oberleithner, University of Muenster, Muenster, Germany
Dr. Daniele Bano, MRC Toxicology Unit, Leicester, UK
Dr. Roy Larson, Ribeirao Preto School of Medicine, USP, Ribeirao Preto, Brazil
Dr. Edward Koenig, State University of New York at Buffalo, Buffalo, USA
Dr. John Mercer, Mac Laughlin Research Institute, Great Falls, USA
Dr. George Bloom, University of Virginia, Virginia, USA
Dr. Gary Bassell, Albert Einstein College of Medicine, New York, USA
Dr. Claudio Cameron, Federal University of the State of Rio de Janeiro, Rio deJaneiro, Brazil

Dr. Foued Spindola, Federal University of Uberlandia, Uberlandia, Brazil
Dr. William Provance, MacLaughlin Research University, Great Falls, USA
Dr. Miguel Seabra, Dr. Alistair Hume, Imperial College, London, UK
Dr. John Kendrick-Jones, Medical Research Council, UK
Dr. Georg Krohne, Central Division of Electron Microscopy; Dr. Ricardo Benavente, "Theodor Boverí" Institute Biocentre, University of Würzburg, Germany
Dra. María I. Herrera, Electron Microscopy Department, Instituto de Salud Carlos III, Ministerio de Sanidad y Consumo. Madrid, Spain
From the University of the Republic, Montevideo, Uruguay:
Dr. Gonzalo Pizzarro, Biophysics Department; Dr. Gustavo Brum, Biophysics Department; Dr. Silvia Chifflet, Department of Biochemistry, School of Medicine
Dr. Juan Claudio Benech, Dr. Aldo Calliari, Laboratory of Proteins & Nucleic Acids, IIBCE, Biophysics Area, School of Veterinary
Dr. Alejandra Kun, IIBCE Biochemistry Associated Unit of the School of Sciences
Dr. J. R. Sotelo-Silveira, Department of Cell and Molecular Biology, School of Science, Department of Molecular Neurobiology, IIBCE
Msc. G. Casanova, Dept. of Cell Biology; Msc. C. Chalar, Dept. of Biochem., School of Sciences
Dr. J. R. Sotelo, Laboratory of Proteins and Nucleic Acids, IIBCE

Tentative list of subjects (Lectures)

- Plasma Membrane Calcium ATPases (PMCA)
- Sarcoplasmic Reticulum Calcium ATPases (SERCA)
- Calcium Channels
- Synaptic Calcium Microdomains
- $Na^{+}Ca^{2+}$-Exchangers
- The mitochondria as an emergency Calcium Store
- The Nuclear Envelope as a Calcium Store
- The Nuclear Pore Complex
- The role of Calcium as a Second Messenger
- Calcium and Apoptosis
- Calcium Calmodulin and Regulation of Gene Expression
- IP_3 Receptors
- Myosin Va and Actin Motor Protein
- Myosin Vb and Recycling of Membranes
- Genetic of Unconvenional Myosins
- Assembly of Actin
- Caveolin-1 trafficking and Myosin Vc
- The Role of RNP in Neuron Polarity
- How Molecular Motors Connect to Specific Organelles
- Relation of Molecular Motors to Periaxoplasmic Ribosomal Plaque Domains
- Myosin V Light Chains
- Myosin Va and Transferrin Trafficking
- Myosin VI Motor Protein
- Myosin Va and Cell Death
- Microtubular Dependent Motors (Kinesins and Dyneins)
- The Nuclear Cytoskeleton and the Nuclear Envelope in Meiosis

Tentative list of Practicals:

- Cellular Free Calcium Recording Using Calcium Fluorescent Dyes
- Calcium Channels
- Isolated Nuclei as a Model to Study Gene Expression
- Fluorescent Probes for Live-Cell Microscopy
- Starfish Oocytes as a Tool to Study Cell Cycle Reinitiation and Fertilization
- RT-PCR Used to Identify Specific mRNAs in the Peripheral Nervous System

- The Actin Cytoskeleton and Melanosome Transport
- Uncoupling Myosin Va and Rab27a Clusters Melanosomes in Melanocytes
- Intracellular Localization of IQGAPs
- Periaxoplasmic Ribosomal Plaques (PARPs) Domains in Goldfish Giant Mauthner Axons
- Myosin Va Synthesis in Rat Sciatic Nerves Measurement (immunoprecipitation)
- Actin Cytoskeleton Activity During Plasma Membrane Depolarization in Cultured Cells
- The Nuclear Cytoskeleton
- The Nuclear Envelope in Meiosis

Language: English

Participation: Number of expected foreign students (practical course): 18
Number of expected local students (practical course): 12
Students will be selected on the basis of a curriculum, giving priority to the ability to follow the course and to use the acquired knowledge in their place of origin. At least one half of foreign students must be from Latin-America. The travel of foreign students will be supported within the available budget.

Applications: Students can apply by E-mail to sotelo@iibce.edu.uy, sending a letter stating the reasons for the interest of the course, two letters of recommendation and a Curriculum Vitae (as an attachment in Word). If they applied for financial support, they must justify the amount requested and why they need it. Air mail applications should be sent to Dr. J. R. Sotelo, Laboratory of Proteins and Nucleic Acids, I.I.B.C.E. Avenida Italia 3318, C.P. 11600, Montevideo, Uruguay. Accepted students must present a Poster showing their own research. Selection will be operated by the organizing committee without appeal.

The announcement will be introduced in our web site http://iibce.edu.uy/biofisica/sotelo.htm

Deadline for application: July 6, 2005.
Date of notification by the organizer: August 5, 2005.