



United Nations Educational, Scientific and Cultural Organization
Organisation des Nations Unies pour l'éducation, la science et la culture

ICRO INTERNATIONAL CELL RESEARCH ORGANIZATION **ORGANISATION INTERNATIONALE DE RECHERCHE SUR LA CELLULE**

ICRO-UNESCO-EMBO International Symposium and Training Course on Molecular Motors and the Cytoskeleton

**Rio de Janeiro, Brazil
May 03-14, 2004**

Sponsors: International Cell Research Organization (ICRO-UNESCO)
European Molecular Biology Organization (EMBO)
Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)
Coordenação de Aperfeiçoamento de Pessoal de Ensino Superior (CAPES)
Fundação Carlos Chagas Filho de Amparo a Pesquisa do Estado do Rio de Janeiro (FAPERJ)
Universidade Federal do Estado do Rio de Janeiro (UNIRIO)
Universidade Federal do Rio de Janeiro (UFRJ)
Universidade Estácio de Sá
Universidade Castelo Branco

Organizing Committee:

Main organizer:

L. C. Cameron (Universidade Federal do Estado do Rio de Janeiro - UNIRIO)

International Organizer(s):

Ernesto Carafoli (Italy); John Mercer (USA)

Local Organizer(s):

Enilza Espreafico - Universidade de São Paulo; Foued Espindola – Universidade Federal de Uberlândia; Roy Larson – Universidade de São Paulo

Objectives:

The main topic will be Molecular Motors and the Cytoskeleton. 20 advanced students will be admitted. Four days (Fri-Mon, May 07-10) will be reserved for a Symposium, where recent results can be shown and discussed. Students are strongly encouraged to participate in the poster section. We plan to have a ~ 3 h lectures (each morning) and 5 students passing each day with an investigator who has made important contributions to our understanding of the molecular basis of cell motility.

Programme:

The course will schedule 8 lectures on the state of art in the area of molecular motors and the cytoskeleton. The laboratory part of the course will consist of 8 different experiments. The students accepted in the practical course will have access to all lectures and, on a rotative basis, to all practicals.

Lectures:

Myosin superfamily; Unconventional myosins; Dynein superfamily; Kinesin superfamily; Molecular motors interaction; Molecular motors, Cytoskeleton and cell cycle; Molecular motors synthesis; Ca^{2+} , calmodulins as motility regulators; Energy transduction in molecular motors; Filaments assembly and disassembly.

Friday to Monday will be reserved for a Symposium, where recent results can be shown and discussed.

Laboratory sessions:

Molecular motors, excitotoxicity and nervous system injury; Kinesin and myosin interaction; Cytoskeletal interactions during cell attachment and locomotion; New approaches to study myosin ATPase sites; Ca²⁺/Calmodulin interaction with target proteins; Unconventional myosins; Synthesis of cytoskeletal proteins in the axonal territory; Microtubule motors and intracellular transport; Molecular motor/cargo interactions; Cytoskeleton, calcium signalling and oocyte fertilization.

Tentative Teaching Staff:

Enilza Espreafico - Universidade de São Paulo - Brazil
Ernesto Carafoli - University of Padova – Italy
Foued Espindola – Universidade Federal de Uberlândia - Brazil
George Langford - Dartmouth College – USA
John Kendrick-Jones - Cambridge University - UK
John Mercer - McLaughlin Research Institute - USA
Jose Sotelo - Inst. Investigaciones Biológicas Clemente Estable – Uruguay
Juan Benech – Inst. Investigaciones Biológicas Clemente Estable - Uruguay
Julio Moran – Universidad Nacional Autónoma de México - México
L. C. Cameron - Universidade Federal do Estado do Rio de Janeiro - Brazil
Luigia Santella - Stazione Zoologica "A. Dohrn" - Italy
Roy Larson – Universidade de São Paulo – Brazil
Silvestre Alavez– Universidad Nacional Autónoma de México - México
Vladimir Gelfand – University of Illinois at Urbana-Champaign - USA
William Provance - McLaughlin Research Institute - USA

Language: The language of the course will be English

Participation:

The lectures and the Symposium will be open to assistance. The practical course will be limited to 20 students (graduates or young researchers, 12 international and 08 from Brazil).

Applications:

A US\$ 100 fee will be charged as a registration for the lectures and the Symposium.

Applications for the practical course should include:

A short CV including list of publications; a letter of recommendation; details of previous scientific training; a brief statement indicating how this course will be useful for the applicant; indication of financial support from own sources for travelling and housing expenses.

Applicants are urged to apply for travel grants from their own institutions or governments. A limited number of travel grants will be available for students unable to obtain funds from local sources. The travel will be, partially or totally, reimbursed within the available budget. The amount of support needed should be included in the initial application.

Deadline for application: March 15, 2004

To be sent to:

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Date of notification by the organizer: April 01, 2004