

# Workshop Overview

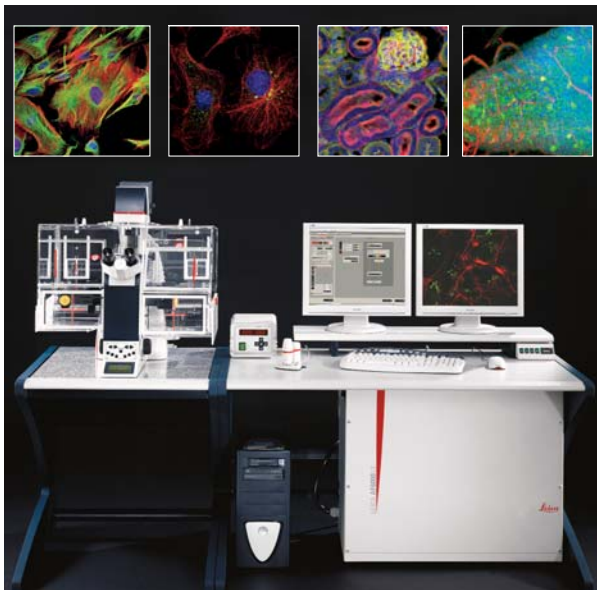
In the lectures participants will have the opportunity to learn all relevant aspects of acquiring and analyzing images of living specimens. The course emphasizes the use of the latest equipment and techniques in fluorescence microscopy, including confocal laser scanning microscopy, multiphoton microscopy, F-techniques (FRET, FRAP, etc.), and wide field imaging. Additionally, the practical sessions will give the participants real "hands on" experience in performing different experiments with living samples using confocal microscope & wide field imaging systems.

## Practical sessions

Imaging systems available for the practical sessions will include 3 confocal, and one wide field deconvolution microscopes. Different experiments including **vesicle traffic, cell migration and cell division with live cell samples** will be performed during the practical sessions.

## Workshop Language

All lectures will be in English, translation services will not be provided.



# General Information

**Venue** **CNIO** – Centro Nacional de Investigaciones Oncológicas  
C/ Melchor Fernández Almagro, 3  
E-28029 Madrid  
[www.cnio.es](http://www.cnio.es)

**Date** 20th – 22nd June 2006

**Scientific organizer:** Dr María Montoya

## Registration

### the whole workshop:

Registration includes all documentation related to the "CNIO-Leica Advanced Live Cell Microscopy Workshop", access to all lectures, lunches and coffee breaks, as well as the participation in the practical sessions. Only 20 places are available, so allocation will be done on a "first come, first served" basis.

Price: 650 Euros.

### lectures only:

This registration is open to 100 participants, and includes documentation related to the "CNIO-Leica Advanced Live Cell Microscopy Workshop", access to all lectures and coffee breaks.

Price: 120 Euros.

Each participant will receive acknowledgement of his/her application. Payment should be by cheque, made payable to Leica Microsistemas S.A. in advance of the course.

Participants should register directly on our website:

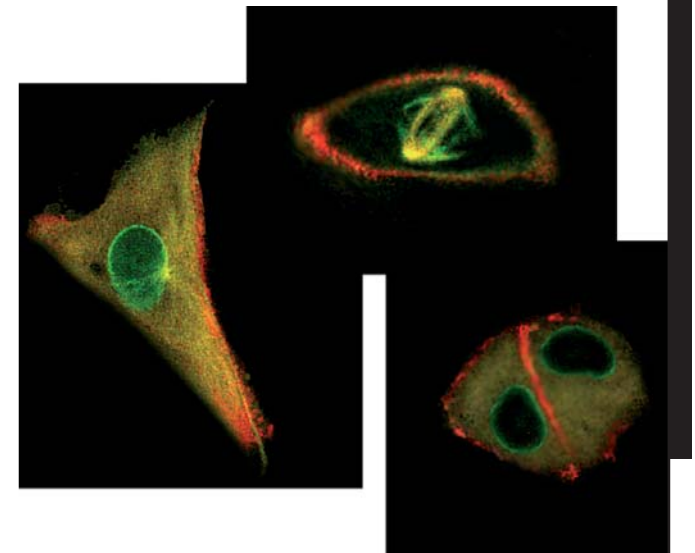
[www.leica-microsistemas.com/cnio](http://www.leica-microsistemas.com/cnio)

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# 2nd Advanced Live Cell Microscopy Workshop

**Madrid, 20th to 22nd June 2006**

Organized by the  
Confocal Microscopy and Cytometry Unit  
(CNIO) and Leica Microsystems



# List of Speakers

The program of this workshop brings a team of top scientists as well as Leica Microsystems specialists, this undoubtedly forms a unique opportunity to become acquainted with the latest advances in this key area of microscopy which is having such an impact on cell science.

- **Valeria Caiolfa**  
San Raffaele Scientific Institute. Milano. Italy
- **Alberto Diaspro**  
University of Genova. Italy
- **José Feijó**  
Gulbenkian Institute. Portugal
- **Kees Jalink**  
Netherlands Cancer Institute. Netherlands
- **Juan Llopis**  
University of Castilla la Mancha. Spain
- **Diego Megías**  
Spanish National Cancer Research Center CNIO. Spain.
- **María Montoya**  
Spanish National Cancer Research Center CNIO. Spain
- **Thomas Nevian**  
University of Bern. Switzerland.
- **Rainer Pepperkok**  
European Molecular Biology Lab. Germany.
- **Jens Stein**  
University of Bern. Switzerland.
- **Miguel Valdeolmillos**  
Neurosciences Institute. UMH-CSIC. Spain.
- **Pierre Vincent**  
CNRS University Pierre et Marie Curie-Paris. France
- **Malte Wachsmuth**  
Pasteur Institute. Korea

Leica Microsystems Advanced Fluorescence Systems Team:

**Alvar Piera, Juan Luis Monteagudo, Francisco Porto, José Doncel and Mark Munro** – Leica Microsystems Spain

**Irmtraud Steinmetz, Rolf Borlinghaus and Christian May** – Leica Microsystems CMS GmbH

## June, the 20th

- 09:00 **“Keeping the cells alive on the microscope”**  
*Diego Megías*
- 09:45 **“Analytical tools in confocal microscopy”**  
*Irmtraud Steinmetz*
- 10:30 **“Imaging FRET between CFP and YFP protein fusions by steady-state fluorescence and lifetime methods”**  
*Juan Llopis*
- 11:15 Coffee Break
- 11:45 **“FRET probes to monitor the subcellular dynamics of second messengers in living cells”**  
*Pierre Vincent*
- 12:30 **“PIP2 as a second messenger: spatiotemporal aspects investigated by live imaging techniques”**  
*Kees Jalink*
- 13:15 **“TIRF: fundamentals and applications”**  
*Christian May*
- 14:00 Lunch
- 15:30 **Simultaneous laboratory practical sessions**  
Live cell experiments will be performed on the following topics:  
– Vesicle traffic,  
– Molecular dynamics (FRAP, Photoactivation, FRET)  
– Cell Division, Cell Migration
- 20:00 End of Session

## June, the 21st

- 09:00 **“True confocal scanning at high speed: better signal and less photo damage by Anti-Triplet Synchronization”**  
*Rolf Borlinghaus*
- 09:45 **“Studying membrane turnover and complex formation of vesicular coat proteins in living cells”.**  
*Rainer Pepperkok*

- 10:30 **“Live cell imaging of molecular interactions and dynamics in three-dimensional tumour cell invasion models”**  
*María Montoya*
- 11:15 Coffee Break
- 11:45 **“Analysing single cell migration in alive mice”**  
*Jens Stein*
- 12:30 **“Imaging signalling mechanisms in neuronal migration”**  
*Miguel Valdeolmillos*
- 13:15 Lunch
- 15:00 **Simultaneous laboratory practical sessions**  
Live cell experiments will be performed on the following topics:  
– Vesicle traffic,  
– Molecular dynamics (FRAP, Photoactivation, FRET)  
– Cell Division, Cell Migration
- 19:30 End of Session

## June, the 22nd

- 09:00 **“Two-photon 7D investigations and other stories”**  
*Alberto Diaspro*
- 09:45 **“Studying nuclear organization using time-resolved microscopy and correlation spectroscopy of fluorescence”**  
*Malte Wachsmuth*
- 10:30 **“Two-photon Fluorescence Microscopy to Image Structure and Function of Neocortical Neurons”**  
*Thomas Nevian*
- 11:15 Coffee Break
- 11:45 **“Studying dynamics and assembly of membrane receptors with single molecule sensitivity by 2-photon live cell fluorescence microscopy”**  
*Valeria Caiolfa*
- 12:30 **“Live cell imaging methods: new tools and old tricks”**  
*José Feijó*
- 14:00 Lunch
- 15:30 End of Session