Technical Information

Workshop overview
Through lectures, participants will be taught all relevant aspects of deriving important parameters from living specimens using optical techniques. 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 of living specimens. Additionally, practical sessions will give the opportunity to participants to perform time-lapse imaging with living samples using confocal microscope & wide field imaging systems.

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.

- **Pierre-Alix Dancer**
  Mauna Kea Technologies. France
- **Alberto Diaspro**
  University of Genova. Italy
- **José Feijó**
  Gulbenkian Institute. Portugal
- **Adriaan Houtsmuller**
  Josephine Nefkens Institute, Netherlands.
- **Kees Jalink**
  Netherlands Cancer Institute. The Netherlands
- **Juan Llopis**
  University of Castilla la Mancha. Spain
- **Diego Megías**
  Spanish National Cancer Research Center. Spain.
- **Maria Montoya**
  Spanish National Cancer Research Center. Spain
- **Thomas Nevian**
  University of Bern. Switzerland.
- **Rainer Perpperkok**
  European Molecular Biology Lab. Germany.
- **Jens Stein**
  University of Bern. Switzerland.
- **Alexei Tepikin**
  University of Liverpool. United Kingdom
- **Pierre Vincent**
  CNRS University of 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 Werner Wittke – Leica Microsystems CMS GmbH

General Information

Venue CNIO –
Spanish National Cancer Research Center
Melchor Fernández Almagro, 3
E-28029 Madrid
www.cnio.es

Date 4th – 6th October 2007

Scientific organiser 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 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

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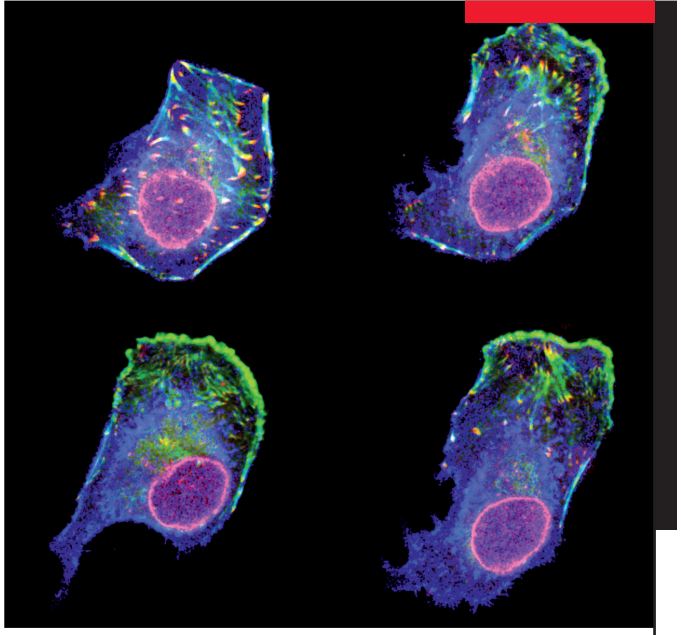
Practical sessions:
Microscopy systems available for the practical sessions will include two high speed & high resolution confocal microscopes, one widefield deconvolution system, and one TIRF microscope. Different experiments including vesicle traffic, cell migration, cell division, and focal adhesions with live cell samples will be performed during the practical sessions. All lectures will be in English, translation services will not be provided.

Leica MICROSYSTEMS



3rd Advanced Live Cell Microscopy Workshop

Madrid, 4th to 6th October 2007

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

cnio Centro Nacional de Investigaciones Oncológicas

Leica MICROSYSTEMS

Thursday 4th October

Chair María Montoya: Welcome
9:00 *Diego Megías*
"Keeping cells alive on the microscope"

9:45 *Irmtraud Steinmetz*
"New Systems for Live Cell Microscopy: Electrophysiology and Matrix Screening"

10:30 *Juan Llopis*
"Imaging protein interactions with fluorescent proteins"

11:15 Coffee Break

Chair Juan Llopis
11:45 *Pierre Vincent*
"Real-time imaging of second messengers in neurons, in brain slices and in vivo."

12:30 *Kees Jalink*
"PIP2 as a second messenger: spatiotemporal aspects investigated by live imaging techniques"

13:15 Lunch

Chair Kees Jalink
14:30 *Rainer Pepperkok*
"Light microscopy based approaches to study organelle biogenesis and regulation"

15:15 *María Montoya*
"Imaging molecular dynamics and interactions in tumour cell invasion models"

16:00 *Adriaan Houtsmuller*
"Combined FRAP and FRET reveal compartmentalisation of androgen receptors"

16:45 Coffee Break

Chair Rainer Pepperkok
17:15 *Jens Stein*
"In vivo imaging of lymphocyte migration"

18:00 *Rolf Borlinghaus*
"New high resolution imaging techniques"

18:45 End of Session

Friday 5th October

Chair J. Feijó
9:00 *Alberto Diaspro*
"Two-photon 7D investigations and other stories"

9:45 *Thomas Nevian*
"Combined two-photon and infrared scanning gradient contrast microscopy – A tool for targeted patch-clamp recordings in brain slices"

10:30 *Alexei Tepikin*
"Imaging techniques in studies of signaling – bioenergetics coupling"

11:15 Coffee Break

Chair Alberto Diaspro
11:45 *José Feijó*
"Live cell imaging methods: new tools and old tricks"

12:30 *Malte Wachsmuth*
"Studying molecular dynamics in the nucleus with confocal imaging and fluorescence correlation spectroscopy"

13:15 *Pierre-Alix Dancer*
"FCM1000: a new way to conceive in vivo microscopic imaging"

14:00 Lunch

15:30 **Simultaneous laboratory practical sessions will include:**
– Widefield time lapse microscopy imaging of cell migration
– TIRF microscopy for visualizing focal adhesions
– Confocal FRET analysis of molecular interactions
– Confocal studies of molecular dynamics (FRAP, Photoactivation)

19:30 End of Session

Saturday 6th October

09:00 **Simultaneous laboratory practical sessions will include:**
– Widefield time lapse microscopy imaging of cell migration
– TIRF microscopy for visualizing focal adhesions
– Confocal FRET analysis of molecular interactions
– Confocal studies of molecular dynamics (FRAP, Photoactivation)

13:00 End of Session