

Leica Microscopy Workshop – Fluorescence Microscopy

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 Widefield imaging. Additionally, the practical sessions will give the participants real “hands on” experience in performing different experiments with living samples using Confocal and Widefield imaging systems.

The workshop will take place over 3 full days at the Institute for Health and Biomedical Innovation, QUT Kelvin Grove.

The general format of the workshop will be seminars in the morning and practical sessions in the afternoon.

Seminars are free, and all can attend, with morning tea provided by Invitrogen and Leica Microsystems. We would ask if you could please **RSVP by Tuesday 28th April 2009** for catering purposes.

Practical sessions

Five workshops will be available to attend. In order to provide enough “hands on” experience for each delegate during each workshop, limited places will be available.

The imaging systems available for the practical sessions will include one Confocal microscope (Leica TCS SP5), and two Widefield deconvolution microscopes (Leica AF6000LX and Leica AF7000).

Workshop 1 - Basic Confocal microscopy

Workshop 2 - Basic Fluorescence microscopy (Fundamental principles of Fluorescence microscopy)

Workshop 3 - Widefield Live Cell Imaging (Fundamental principles of Live Cell Imaging with Widefield inverted microscope)

Workshop 4 - Live Cell imaging with Confocal microscopy (Fundamental principles of Live Cell Imaging with Confocal inverted microscope)

Workshop 5 - FRAP and FRET with Confocal microscopy

Each workshop will cost - \$300 (\$200 for IHBI members – limited number)

If participants would like to bring their own samples, please contact Christina Theodoropoulos (Christina.theodoropoulos@leica-microsystems.com) for further details.

For bookings and further information regarding the workshop, please contact Christina by **Tuesday 28th April 2009**

By email: Christina.theodoropoulos@leica-microsystems.com or Phone: 0488 284 015

Outline of the Workshop

Wednesday 6th May 2009

9am – 9.15am – Welcome

9.15am - 10.30am – Basic principles of Fluorescence microscopy including Widefield and Confocal microscopy

11am – 11.30am – Morning tea sponsored by Invitrogen

11.30.am - 12pm – Fluorescent Dye Technologies: Fixed Cell Staining

12pm – 12.30pm - Dye Another Way: Stains for Organelles

12.30pm – 1.30pm – Lunch break for Workshop participants

1.30pm - 5.30 pm – Practical sessions - Workshop 1 and Workshop 2 with afternoon tea

Thursday 7th May 2009

9am – 10.30am – Advanced Confocal microscopy techniques including FRAP, FRET AB, FRET SE, FLIM and FCS

10.30am – 11am – Morning tea sponsored by Leica Microsystems

11pm - 12pm – Live cell imaging – keeping cells alive and imaging techniques with Widefield and Confocal microscopes

12pm – 12.30pm - New Technologies Microscopy - Total Internal Reflectance Microscopy

12.30pm – 1.30pm - Lunch break for Workshop participants

1.30pm – 5.30 pm – Practical sessions - Workshop 2, 3 and 4 with afternoon tea

Friday 8th May 2009

9am – 10.30am - New technologies in Confocal Microscopy - STED, Electrophysiology, White light laser, Matrix screening SP5

10.30am – 11am – Morning tea sponsored by Leica Microsystems

11am – 12.30pm – Leica Advanced Fluorescence powered by METAMORPH

12.30pm – 1.30pm – Lunch break for Workshop participants

1.30pm – 5.30pm – Practical sessions - Workshop 2, 3 and 5 with afternoon tea

